2827

STOPPING
WATER POLLUTION
AT ITS SOURCE

MISA

Municipal Industrial Strategy for Abatement

REPORT ON THE ASSESSMENT

OF THE

QUALITY ASSURANCE AND QUALITY CONTROL DATA

FOR THE

INORGANIC CHEMICAL SECTOR

Ontario

Environment
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REPORT ON THE ASSESSMENT OF THE QUALITY ASSURANCE AND QUALITY CONTROL DATA FOR THE INORGANIC CHEMICAL SECTOR

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EXECUTIVE SUMMARY

Twenty-eight Inorganic Chemical Sector (ICS) plants were regulated under the MISA (Municipal-Industrial Strategy for Abatement) program to provide twelve months of effluent monitoring data.

To assess the quality of the effluent monitoring data, ICS plants were also required to submit under Regulation specified quality assurance and quality control (QA/QC) data. The assessment of QA/QC data as discussed in this report provided information on the "analytical goodness" of the larger effluent monitoring database. Based on the QA/QC assessment, decisions on the suitability of the effluent monitoring data for use in the effluent limits setting process were then made.

The QA/QC data assessment process was based on the approach outlined in the draft report of the Issue Resolution Committee[1].

The QA/QC data assessment process has confirmed that the majority of the effluent monitoring data for the MISA ICS plants are acceptable for use in the development of effluent limits. The assessment has also identified parameters, (Table 2), which will require further specific attention before being considered for limits. Parameters that were categorized as "found" on the basis of the Laboratory Method Detection Limit (LMDL) being greater than the Regulation Method Detection Limit (RMDL) are also identified in a table (Table 3).

Parameters classified as "found" or "not found" and for which analytical difficulties were encountered are listed in Tables 4 and 5.

The GLOSSARY section defines terms used in this report.

Specific data used in the QA/QC assessment for each plant is shown in Appendices C and D.

I INTRODUCTION

The Ontario Ministry of Environment and Energy Municipal-Industrial Strategy for Abatement (MISA) program is a regulatory program with the ultimate goal of virtual elimination of persistent toxic contaminants in municipal and industrial discharges into Ontario waterways.

MISA Effluent Monitoring Regulations were promulgated for nine industrial sectors, including the Inorganic Chemical Sector (ICS). The Effluent Monitoring Regulations required direct dischargers to sample and analyze their effluents for a period of twelve consecutive months.

This report is an assessment of the quality assurance/quality control (QA/QC) data which was submitted by the ICS plants along with the effluent monitoring data. The QA/QC assessment process, as outlined in the draft MISA Issue Resolution Committee Reports (1), was used to evaluate the suitability of the effluent monitoring data for use in the effluent limits setting process and to confirm the presence/absence of contaminants in the effluent, intake, once-through cooling water and storm water streams.

II BACKGROUND

Twenty-two plants were included in the ICS under the original Ontario Regulation 395/89 which began the first regulatory monitoring period on December 1, 1989. Seven industrial gas plants were added for twelve months of monitoring as of February 1, 1990 under an amendment by Ontario Regulation 649/89.

One plant, Canadian Liquid Air, Courtright, was shutdown in 1989 before monitoring commenced, while a second site, Fiberglas Canada, Sarnia ceased production in May, 1990 leaving a total of twenty-seven sites in the Sector. Monitoring data for Fiberglas is included in this report although it was not verified by the plant. Allied Chemical Canada (Amherstburg) and Cyanamid Canada (Niagara Falls plant) recently announced planned shutdowns in 1992.

Under the ICS Monitoring Regulation, each plant had its own site-specific monitoring schedule including QA/QC requirements. The QA/QC data for each plant was analyzed separately.

Generally each plant was required to collect QA/QC samples consisting of travelling blanks, travelling spiked blanks and duplicates/splits both monthly to match regular daily and thrice-weekly parameter monitoring and quarterly to match weekly and monthly parameter monitoring.

The effluent monitoring data for the ICS plants have been published in a separate twelve-month data report(2).

III THE EFFLUENT MONITORING DATABASE

The effluent data was validated and used in calculations on the basis of the following rules:

- All analytical results with the following remark codes were excluded from the calculations:

IB	Background interference
IC	Interference from colour
SIP	Sample improperly preserved
UCR	Data unreliable; could not confirm by re-analysis
!IN	No data, insufficient volume
NM	No effluent, no sample
OLD	Old, sample exceeds maximum storage time
>	Data values greater than
UQC	Data unreliable, possible lab QA/QC problems

- For other remark codes, zero or blank concentration values were omitted.
- Data with analytical results below the Regulation Method Detection Limit (RMDL) were used as reported.
- For values less than RMDL/10 (see Appendix B for list of RMDLs), the value of RMDL/10 was substituted.
- It should be noted that when a parameter level is reported as less than a detection limit (i.e. "<DL" remark coded data) the actual concentration in the effluent is generally understood to be within the range from zero to the detection limit.

IV IMPORTANCE OF THE QA/QC ASSESSMENT PROCESS

To assess the quality of the effluent monitoring data submitted under the Effluent Monitoring Regulation, ICS plants were required to submit quality assurance and quality control (QA/QC) data. The assessment of the QA/QC data using a formal process provided information on the "analytical goodness" of the larger effluent monitoring database. It allowed classification of the parameters in the effluent database as to their suitability for use in the limits setting process and to confirm the presence/absence of parameters in the effluent, intake, once-through cooling water and storm water streams.

The QA/QC data consisted of field QA/QC data submitted by each plant and internal laboratory QA/QC data kept on file at each laboratory that performed sample analysis. Table 1 lists the types of field QA/QC samples taken, their significance, and the expected results.

The laboratory QA/QC data consisting of laboratory QA/QC checks (laboratory blanks, spiked blanks and replicate analyses), was retained by the laboratories for possible review by the Ministry.

The purpose of the QA/QC data is two-fold:

- to identify and assess the significance of:
    - biases
    - chronic contamination
    - data variability
    - false results (either positive or negative)
    - field sampling or laboratory analytical problems; and
- to determine the validity of the effluent monitoring database.

One of the following conclusions could be drawn from the QA/QC assessment process with respect to the effluent monitoring data:

- The data are acceptable and can be used for limits setting;
- The data are equivocal (of limited quality) and should be interpreted carefully before being considered for limits setting; or
- The data are unsuitable and the given parameters should only be used for limits setting if it can be shown that they are generated or used at the plant site and their presence in the effluents is probable.

V THE QA/QC ASSESSMENT PROCESS

BACKGROUND

The QA/QC assessment process used in evaluating the effluent monitoring data for the ICS Sector followed the approach outlined in Ref (1). The approach consisted of three main steps:

Step 1. The RETRIEVAL AND SCREENING for each plant of all the field QA/QC data for the "found parameters" and all the corresponding effluent monitoring data for that plant.

Step 2. The SORTING AND SUMMARIZING of the QA/QC and effluent monitoring data.

Step 3. The EVALUATION OF THE QA/QC DATA and effluent monitoring data.

"Found" Parameters

In the evaluation of the QA/QC data, emphasis was placed on those parameters "found" at each plant site in either the intake, process, combined, once-through cooling water or storm water streams[1]. In order to determine these "found" parameters, the effluent monitoring data were analyzed and parameters defined as "found" according to the following 90/10 rule.

- In selecting "found" parameters for each plant site in the ICS, a parameter was listed as "found" unless the monitoring data showed (at a 95% confidence level) that a statistical proportion of 0.9 of the data was at a concentration of less than the Regulation Method Detection Limit (RMDL).

pH was not included in the QA/QC assessment since it will be regulated within the range specified in the Effluent Limits Regulation. QA/QC data for specific conductance was not required from the plant sites.

Emphasis was placed on the evaluation of the QA/QC data for "found" parameters since these parameters are candidates for effluent limits setting.

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[1] "Found" parameters for the process and combined effluents will be considered for effluent limits setting. "Found" parameters identified in either the intake, once-through cooling water and storm water effluents will only be assessed for presence.

All parameters listed in Appendix E (Tables E1 to E27) are the "found" parameters identified at each ICS plant site.

Parameters were also evaluated for possible false negative results by examining the recovery levels of the travelling spiked blanks to check for under-recoveries and by examining the uncorrected and corrected monitoring data for over-corrections.

METHODOLOGY

1. RETRIEVAL AND SCREENING

Appendix C contains the Working QA/QC tables summarizing the effluent monitoring data and the accompanying field QA/QC data on a plant-by-plant basis. The information presented in these tables represented the first step in the QA/QC assessment. The following tables, where feasible, were assembled for each plant:

- Detection Frequencies and Concentration Ratios for Frequently Monitored "Found" Parameters. (Daily, Thrice-Weekly, and Weekly Monitoring)

- Detection Frequencies and Concentration Ratios for Infrequently Monitored "Found" Parameters. (Monthly, Quarterly, and Semi-Annual Monitoring)

- Detection Frequencies and Concentration Ratios for "Found" Parameters in Travelling Blanks
  - to identify any sample contamination from field operations.

- Absolute Value of the Difference Between Uncorrected Travelling Blank Sample Concentration and Corrected Travelling Blank Sample Concentration Divided by the Regulation Method Detection Limit for "Found" Parameters
  - to identify any laboratory corrections made to the travelling blank results.

- Range of Recoveries and Ratio of Spiked Quantity to Regulation Method Detection Limit for "Found" Parameters
  - to provide a check on method recovery.

- Absolute Value of the Difference Between Uncorrected Travelling Spiked Blank Sample Concentration and Corrected Travelling Spiked Blank Sample Concentration Divided by the Regulation Method Detection Limit for "Found" Parameters
  - to identify any laboratory corrections made to the travelling spiked blank results.

- Absolute Value of the Difference Between Effluent Monitoring and Duplicate Sample Concentration Divided by the Regulation Method Detection Limit for "Found" Parameters
  - to assess precision of analysis.

- Absolute Value of the Difference Between Uncorrected Duplicate Sample Concentration and Corrected Duplicate Sample Concentration Divided by the Regulation Method Detection Limit for "Found" Parameters
  - to identify any laboratory corrections made to the duplicate results.

- Absolute Value of the Difference Between Effluent Monitoring and Split Sample Concentration Divided by the Regulation Method Detection Limit for "Found" Parameters
  - to assess precision of analysis.

- Absolute Value of the Difference Between Uncorrected Split Sample Concentration and Corrected Split Sample Concentration Divided by the Regulation Method Detection Limit for "Found" Parameters
  - to identify any laboratory corrections made to the split results.

- Absolute Value of the Difference Between Uncorrected Monitoring Sample Concentration and Corrected Monitoring Sample Concentration Divided by the Regulation Method Detection Limit for "Found" Parameters
  - to identify any laboratory corrections made to the effluent monitoring results. (The difference is known as the laboratory blank. This is normally used to correct for labware/reagent contamination.)

Specific problematical data was individually analyzed and is reported in Appendix D.

2. SORTING AND SUMMARIZING

After summarizing the effluent monitoring data and QA/QC data, the second step in the QA/QC assessment process was to classify individual parameters according to their frequency of occurrence and their level in each effluent stream.

Classification of parameters according to their frequency of occurrence dictates the strategy which is to be followed for interpreting the QA/QC data. The report of the Issue Resolution Committee on QA/QC (1) presents three strategies for use in evaluating QA/QC data. These strategies provided guidance for the systematic evaluation of specific QA/QC data:

Strategy 1: **Evaluation of "Frequently Found" Analytes**

Assess the likelihood of over-estimation or under-estimation based on the recovery of travelling spiked blanks. Assess the possibility of error in blank corrections. Assess precision using field duplicates and, if necessary, assess precision using laboratory replicates.

Strategy 2: **Evaluation of "Infrequently Found" Analytes**

Determine the possibility of false negative conclusions based on the possible under-recovery of travelling spiked blanks. Determine the possibility of false positive conclusions based on possible chronic positive travelling blanks. If necessary, determine the possibility of under-correction or over-correction for laboratory blanks.

Strategy 3: **Evaluation of "Non-occurrence" Analytes**

Determine the possibility of false negative conclusions based on the possible under-recovery of travelling spiked blanks. If necessary, determine the possibility of over-correction for laboratory blanks.

The following three main categories were used for sorting according to the strategies identified above:

- Frequent Occurrence
- Infrequent Occurrence
- Non-occurrence

The categorical division was only used for the purpose of identifying data in the QA/QC data review exercise.

A sorting criteria of 40% frequency of detection above the (RMDL) was used to distinguish each category. Thus, the following classifications were developed:

FREQUENT OCCURRENCE: More than 40% of the parameter observations are above the RMDL.

INFREQUENT OCCURRENCE: Between 1% and 40% of the parameter observations are above the RMDL.

NON-OCCURRENCE: Less than 1% of the parameter observations are above the RMDL.

Within both the Frequent and the Infrequent Occurrence categories it was necessary to further classify the parameters according to the levels at which they were observed. Three sub-categories were used for this further classification:

- High Level - Used to describe quantitative data.
- Medium Level - Used to describe semi-quantitative data.
- Low Level - Used to describe qualitative data.

The following criteria for these classifications were then developed:

Frequent Occurrence:

HIGH LEVEL: More than 50% of the parameter observations are above 5 times the RMDL.

MEDIUM LEVEL: More than 50% of the parameter observations are above 2 times the RMDL.

LOW LEVEL: More than 40% of the parameter observations are above the RMDL.

Infrequent Occurrence:

HIGH LEVEL: Of those observations greater than 2 times the RMDL, more than 50% are higher than 5 times the RMDL.

MEDIUM LEVEL: Of those observations greater than the RMDL, more than 50% are higher than 2 times the RMDL.

LOW LEVEL: More than 1% but no more than 40% of the parameter observations are above the RMDL.

The following categorization of data was developed:

Frequent Occurrence - High Level (FH)
More than 50% of the observations are greater than 5 times the RMDL.

Frequent Occurrence - Medium Level (FM)
More than 50% of the observations are greater than 2 times the RMDL.

Frequent Occurrence - Low Level (FL)
More than 40% of the observations are above the RMDL.

Infrequent Occurrence - High Level (IH)
Between 1% and 40% of the observations are above the RMDL, and of those observations greater than 2 times the RMDL, more than 50% are higher than 5 times the RMDL.

Infrequent Occurrence - Medium Level (IM)
Between 1% and 40% of the observations are above the RMDL, and of those observations higher than the RMDL, more than 50% are higher than 2 times the RMDL.

Infrequent Occurrence - Low Level (IL)
Between 1% and 40% of the observations are above the RMDL.

Non-occurrence (NO)
Less than 1% of the observations are above the RMDL.

DATA CLASSIFICATION METHOD

In order to classify the effluent monitoring data according to the frequency of occurrence categories, the twelve month average was calculated for each parameter for the control point where QA/QC samples were taken at each plant. The average was then divided by the RMDL for the parameter. This value was defined as the parameter "concentration ratio". This ratio allowed for the comparison of data for different parameters. A concentration ratio of 1.0 or less would indicate that there was little or no significant presence of the parameter in the intake or effluent stream(s) since the concentration was equal to or below the RMDL.

3. EVALUATION OF QA/QC DATA

"FOUND" PARAMETERS

The QA/QC data for "found" parameters were evaluated as follows (based on the classification of each parameter):

Frequent Occurrence - High Level
Accuracy, recovery, and precision were investigated.

Frequent Occurrence - Medium Level
Recovery, precision and potential for blank biases were investigated.

Frequent Occurrence - Low Level
Potential for false positives (travelling blank detections or high recoveries of travelling spiked blanks) and precision were investigated.

Infrequent Occurrence - High Level
Process changes and potential for contamination were investigated.

Infrequent Occurrence - Medium Level
Recovery and potential for blank biases were investigated.

Infrequent Occurrence - Low Level
The potential for false positives (high recoveries) or false negatives (low recoveries of travelling spiked blanks or over-corrections for laboratory blanks) was investigated.

Non-occurrence
The potential for false negatives (low recoveries of travelling spiked blanks or over-corrections for laboratory blanks) was investigated.

"NOT FOUND" PARAMETERS

Uncorrected data and the recovery levels of the travelling spiked blanks for parameters that were "not found" using the 90/10 selection criteria were also investigated.

VI SPECIFIC PARAMETER QA/QC DATA ASSESSMENT

"FOUND" PARAMETERS

In order to assess the QA/QC data for the sector, each individual plant site required its own QA/QC assessment.

In the QA/QC assessment process, the following steps were used:

- In assessing the travelling blank data, average travelling blank concentration ratios which were consistently less than 1.0 or much lower than the average effluent concentration ratio often indicated that the effluent monitoring data for that parameter were satisfactory. If the data did not meet this criteria, individual travelling blank results were compared to the effluent monitoring data to assess field contamination.

- In assessing the travelling spiked blank data, a range of recoveries inside 60% to 140% were deemed satisfactory. If the data did not meet this criteria, individual recoveries were compared to the effluent monitoring data to assess potential false negatives or false positives. Recoveries lower than 60% increase the risk of a false negative conclusion as to the presence or absence of a parameter. Recoveries higher than 140% can only be attributed to either data entry errors or field/laboratory contamination. If an over-recovery was due to field contamination, the contamination would also be present in the blank samples and would be identified through the evaluation of travelling blanks.

- In assessing the duplicate or split sample data, average difference ratios that were less than 1.0 or much less than the average effluent concentration ratio implied that precision was satisfactory. If the data did not meet this criteria, then the individual duplicate/split results were compared to the effluent monitoring data to assess analysis variability.

- In assessing the uncorrected monitoring data, average difference ratios which were less than 1.0 or not comparable to the average effluent concentration ratio implied that laboratory blank corrections (the difference) were insignificant. If the data did not meet this criteria, individual uncorrected results were compared to the effluent monitoring data for reliability of corrections. If corrections were made to the effluent monitoring samples, then corrections to the QA/QC samples were checked for consistency.

One of the following conclusions was then made about the parameter:

- Data are acceptable.
- Data are equivocal.
- Data are unsuitable.

During the analysis of the QA/QC data, consideration was also given to the following:

- "Found" parameters with out of compliance Laboratory Method Detection Limits (LMDLs).

  A parameter may have become a "found" parameter because the laboratory was unable to meet the RMDL. Such a parameter may still be limited depending on how much higher the LMDL (ie. "<DL" remark-coded data) was compared to the RMDL or because its generation or use at the plant site and its presence in effluents is probable.

- "Found" parameters with analytical difficulties.

  Some plants diluted their effluent samples before analysis in order to avoid potential interference problems or contamination of their laboratory analytical equipment. Due to this process, a laboratory may not have been able to meet the RMDL for some analytes. As a result, the number reported would be higher than the RMDL with a "<" or "<WE" remark code indicating that this process was carried out. The parameter may still be considered for effluent limits setting depending on how much higher the remark-coded data was compared to the RMDL or if it can be shown that the parameter was generated or used at the plant site and its presence in effluents is probable.

"NOT FOUND" PARAMETERS

Under special circumstances, a "not found" parameter may be considered for effluent limits if it poses a significant threat to human health and the environment. Any significant analytical difficulties associated with the "not found" parameters have to be taken into consideration to set meaningful limits.

In assessing the QA/QC data for the "not found" parameters, the following steps were used (tables for "not found" parameters are **not** shown in this report):

- If the average or maximum recovery was less than 40%, then the individual travelling spiked blank results were examined for potential data entry errors. If no errors existed, the parameter was deemed to be a probable false negative as its concentration was likely to have been under-estimated.

- If there were corrections for laboratory blanks, then the individual uncorrected monitoring results were compared to the effluent monitoring results to assess labware/reagent contamination. If the corrections were significant enough to categorize the parameter as "not found", the parameter was deemed to be a potential false negative.

VII RESULTS AND CONCLUSIONS

The complete results of the QA/QC assessment are shown in Tables 2 to 5.

The background data leading to the classification is shown in Appendices C and D.

- Table 2 lists by plant the parameters requiring discretion for use in the development of effluent limits.

- Table 3 lists by plant site all parameters where the laboratory LMDL was higher than the RMDL.

- Table 4 lists "Found" parameters with labware/reagent contamination.

- Table 5 lists "Not found" parameters with under-recoveries of travelling spiked blanks.

CONCLUSIONS

The formal QA/QC data assessment process has confirmed that the virtually all of the effluent monitoring data for the MISA Inorganic Chemical Sector are acceptable for use in the development of effluent limits.

Table 1 - Types of QA/QC Samples

QA/QC Sample	Definition	Significance	Expected Results
Travelling Blank Sample	A sample of uncontaminated water that is exposed to air at the sampling point.	Identifies any potential contamination of the effluent from the air.	Most of the travelling blank results should be at or below the RMDL.
Travelling Spiked Blank Sample	A sample of uncontaminated water to which a known amount of a standard solution has been added. The sample is taken to the sampling point unopened and returned to the laboratory.	Identifies any degradation of the parameter when the sample is in transit from the sampling point to the laboratory.	The measured result should be within 60% to 140% of the expected value.
Duplicate Sample	One of two samples collected at a sampling point at the same time the monitoring sample is taken.	Determines if a laboratory can duplicate the analysis given two of the same samples.	Most of the differences between the duplicate and monitoring results should be within ±RMDL.
Split Sample	One sample removed from the monitoring sample.	Determines if a laboratory can duplicate the analysis given two of the same samples.	Most of the differences between the split and monitoring results should be within ±RMDL.
Uncorrected Sample	A sample that has not been corrected for laboratory contamination. Data are usually shown for monitoring and QA/QC samples.	Determines if labware/reagent contamination is possible.	The difference between the uncorrected and corrected results should be zero for most ATGs.

TABLE 2 - Parameters Requiring Discretion for Limits Use

Company Name	Parameters	Classification
Allied Chemicals	1,2,3,5-Tetrachlorobenxene	Equivocal
	1,2,4,5-Tetrachlorobenzene	Equivocal
	Bis(2-ethylhexyl)phthalate	Equivocal
	Cadmium ,Chloroform ,Chromium	Equivocal
	Hexachlorocyclopentadiene	Equivocal
	Methlyene Chloride	Unsuitable
Cabot Canada	Copper	Equivocal
Cyanamid Niagara	Aluminum ,DOC ,Total Kjeldahl Nitrogen	Equivocal
Cyanamid Welland	Mercury, PCBT, Selenium, Toluene	Equivocal
General Chemical	Aluminum, Arsenic	Equivocal
ICI Cornwall	Hexachlorocyclopentadiene	Equivocal
IMC	Strontium	Equivocal
Linde (Moore Township)	Aluminum	Equivocal
Nitrochem	Chloroform, Phenol	Equivocal
Norton	Chromium	Equivocal
Partek	Oil and Grease	Equivocal
Puritan Bennett	DOC	Equivocal
Stanchem	Benzene, Hexachlorocyclopentadiene	Equivocal
Union Carbide - Welland	TOC	Equivocal
Welland Chemical	Methylene Chloride(BA 0100,BA 0200)	Unsuitable
	Oil and Grease (OT 0300)	Equivocal

TABLE 3 - Parameters "Found" on Basis of LMDL Above RMDL

Company	Control Points	Parameter
ICI Cornwall	All 3 Control Points	Molybdenum, Copper
	IN 0200, CO 0300	Cadmium
	All 3 Control Points	Hexachlorocyclopentadiene
	IN 0200, PR 0400	Vanadium
Stanchem	BA 0100, IN 0300	Beryllium
	All 2 Control Points	Cadmium, Thallium
	All 2 Control Points	Hexachlorocyclopentadiene
	IN 0300	Molybdenum

TABLE 4 - "Found" Parameters with Laboratory Blank Problems

Company	Parameter
Allied Chemicals	Bis(2-ethylhexyl)phthalate
	Carbon Tetrachloride
	Chloroform
Cabot Canada	Copper
Cyanamid Welland	Toluene
Welland Chemical	Methylene Chloride

TABLE 5 - "Not Found" Parameters with Under-Recoveries of Travelling Spiked Blanks

Plant Site	Parameter	Recoveries (%)
Cyanamid Niagara	Camphene	5 - 24 (15), 5 - 40 (23)
IMC	2,4-Dimethylphenol	8 - 28 (13)
	2,6-Dichlorophenol	6 -50 (34)
	Phenol	8 - 28 (19)
	m-Cresol	15 - 75 (34)
	o-Cresol	9 - 41 (23)
	p-Cresol	18 -75 (36)
Nitrochem	Camphene	5 -43 (25)
	Indole	6 - 48 (35)
	2,4-Dimethylphenol	all results = 9 (9)
	4-Nitrophenol	7 - 70 (30)
	o-Cresol	9 - 43 (27)

( ) = average value

VIII REFERENCES

1) Ontario Ministry of the Environment, Water Resources Branch, "MISA Issues Resolution Process -- Issue Resolution Committee Reports", draft, June 1990, Queen's Printer.

2) Ontario Ministry of the Environment, Water Resources Branch, "Twelve-Month Effluent Monitoring Data Report, Inorganic Chemical Sector", ISBN 0-7778-0094-2, September 1992, Queen's Printer.

IX GLOSSARY

Concentration Ratio: Parameter long term average concentration divided by the Regulation Method Detection Limit.

Corrected data: Data that have been corrected for laboratory method blank analyses.

Difference Ratio: Absolute difference between regular effluent monitoring data and duplicate/split/uncorrected sample divided by the Regulation Method Detection Limit.

Duplicate sample: One of two samples collected at a sampling point at the same time in a manner that minimizes differences between the samples.

Equivocal: The data for the parameter should be used with caution.

LMDL: Laboratory Method Detection Limit.

Method blank sample: A sample that does not contain any parameters for which the sample is to be analyzed nor any substance that might interfere with the analysis.

Qualitative Data: Presence and actual level of analyte are be uncertain.

Quantitative Data: Presence and actual level of analyte are certain.

RMDL: Regulation Method Detection Limit. The maximum allowable LMDL for a laboratory under the regulation.

Replicate sample: One of at least two samples removed from a single sample container in a manner that minimizes differences between the samples.

Semi-quantitative: Presence of analyte is probable but actual level of analyte may be uncertain.

Split sample: One sample removed from a single sample collected at a sampling point in a manner that minimizes differences between the samples.

Travelling blank: A sample of uncontaminated water that accompanies the sample container to the area where other samples are to be collected. The sample of water is opened and resealed in the sampling area and is returned to the laboratory together with the other effluent samples.

Travelling spiked blank: A sample of uncontaminated water to which a known amount of a standard solution has been added. The sample with this solution accompanies the sample container to the sampling area where other samples are to be collected. The sample spiked with solution is left unopened and is returned to the laboratory together with the other effluent samples.

Uncorrected data: Data that have not been corrected for laboratory method blank analyses.

APPENDIX A

MISA INORGANIC CHEMICAL SECTOR PLANTS

Albright and Wilson Americas
Allied Chemicals
Cabot Canada
Columbian Chemicals
Cyanamid Canada (Niagara)
Cyanamid Canada (Welland)
ETI
Exolon-ESK
General Chemical
ICI (Cornwall)
ICI (Courtright)
IMC
Liquid Carbonic (Courtright)
Liquid Carbonic (Maitland)
Nitrochem
Norton
Partek
Puritan-Bennett
Stanchem
Sulco Chemicals
U.C./Linde (Moore Township)
U.C./Linde (Sarnia)
U.C./Linde (Sault Ste. Marie)
UCAR Welland
Washington Mills Electro-Minerals
Washington Mills
Welland Chemical

APPENDIX B

REGULATION METHOD DETECTION LIMITS

Regulation Method Detection Limits (RMDLs) for all Parameters Monitored by the IC Sector

ATG	PARAMETER	RMDL	RUNIT
1	COD	10	mg/L
2	Cyanide Total	0.005	mg/L
3	Hydrogen ion (pH)		
4	Ammonia plus Ammonium	0.25	mg/L
	Nitrate + Nitrite	0.25	mg/L
	Total Kjeldahl Nitrogen	0.5	mg/L
5	DOC	0.5	mg/L
	TOC	5	mg/L
6	Total phosphorus	0.1	mg/L
7	Specific conductance	5	uS/cm
8	Total suspended solids	5	mg/L
	Volatile suspended solids	10	mg/L
9	Aluminum	30	ug/L
	Beryllium	10	ug/L
	Boron	50	ug/L
	Cadmium	2	ug/L
	Chromium	20	ug/L
	Cobalt	20	ug/L
	Copper	10	ug/L
	Lead	30	ug/L
	Molybdenum	20	ug/L
	Nickel	20	ug/L
	Silver	30	ug/L
	Strontium	20	ug/L
	Thallium	30	ug/L
	Vanadium	30	ug/L
	Zinc	10	ug/L
10	Antimony	5	ug/L
	Arsenic	5	ug/L
	Selenium	5	ug/L
11	Chromium (hexavalent)	10	ug/L
12	Mercury	0.1	ug/L
13	Tetra-alkyl lead (Total)	2	ug/L
	Tri-alkyl lead (Total)	2	ug/L
14	Phenolics (4AAP)	2	ug/L
15	Sulphide	20	ug/L
16	1,1,2,2-Tetrachloroethane	4.3	ug/L
	1,1,2-Trichloroethane	0.6	ug/L
	1,1-Dichloroethane	0.8	ug/L
	1,1-Dichloroethylene	2.8	ug/L
	1,2-Dichlorobenzene	1.4	ug/L

ATG	PARAMETER	RMDL	UNIT
16	1,2-Dichloroethane	0.8	ug/L
	1,2-Dichloropropane	0.9	ug/L
	1,3-Dichlorobenzene	1.1	ug/L
	1,4-Dichlorobenzene	1.7	ug/L
	Bromodichloromethane	0.8	ug/L
	Bromoform	3.7	ug/L
	Bromomethane	3.7	ug/L
	Carbon tetrachloride	1.3	ug/L
	Chlorobenzene	0.7	ug/L
	Chloroform	0.7	ug/L
	Chloromethane	3.7	ug/L
	Cis-1,3-Dichloropropylene	1.4	ug/L
	Dibromochloromethane	1.1	ug/L
	Ethylene dibromide	1	ug/L
	Methylene chloride	1.3	ug/L
	Tetrachloroethylene	1.1	ug/L
	Trans-1,2-Dichloroethylene	1.4	ug/L
	Trans-1,3-Dichloropropylene	1.4	ug/L
	Trichloroethylene	1.9	ug/L
	Trichlorofluoromethane	1	ug/L
	Vinyl chloride	4	ug/L
17	Benzene	0.5	ug/L
	Ethylbenzene	0.6	ug/L
	Styrene	0.5	ug/L
	Toluene	0.5	ug/L
	m-Xylene and p-Xylene	1.1	ug/L
	o-Xylene	0.5	ug/L
18	Acrolein	4	ug/L
	Acrylonitrile	4.2	ug/L
19	1-Chloronaphthalene	2.5	ug/L
	1-Methylnaphthalene	3.2	ug/L
	2,4-Dinitrotoluene	0.8	ug/L
	2,6-Dinitrotoluene	0.7	ug/L
	2-Chloronaphthalene	1.8	ug/L
	2-Methylnaphthalene	2.2	ug/L
	4-Bromophenyl phenyl ether	0.3	ug/L
	4-Chlorophenyl phenyl ether	0.9	ug/L
	5-nitro, Acenaphthene	4.3	ug/L
	Acenaphthene	1.3	ug/L
	Acenaphthylene	1.4	ug/L
	Anthracene	1.2	ug/L

Regulation Method Detection Limits (RMDLs) for all Parameters Monitored by the IC Sector (cont'd)

ATG	PARAMETER	RMDL	RUNIT
19	Benz(a)anthracene	0.5	ug/L
	Benzo(a)pyrene	0.6	ug/L
	Benzo(b)fluoranthene	0.7	ug/L
	Benzo(g,h,i)perylene	0.7	ug/L
	Benzo(k)fluoranthene	0.7	ug/L
	Benzylbutylphthalate	0.6	ug/L
	Biphenyl	0.6	ug/L
	Bis(2-chloroethoxy)methane	3.5	ug/L
	Bis(2-chloroethyl)ether	4.4	ug/L
	Bis(2-chloroisopropyl)ether	2.2	ug/L
	Bis(2-ethylhexyl) phthalate	2.2	ug/L
	Camphene	3.5	ug/L
	Chrysene	0.3	ug/L
	Di-n-butyl phthalate	3.8	ug/L
	Di-n-octyl phthalate	2	ug/L
	Dibenz(a,h)anthracene	1.3	ug/L
	Diphenyl ether	0.4	ug/L
	Diphenylamine	14	ug/L
	Fluoranthene	0.4	ug/L
	Fluorene	1.7	ug/L
	Indeno(1,2,3-cd)pyrene	1.3	ug/L
	Indole	1.9	ug/L
	N-Nitrosodi-n-propylamine	3.1	ug/L
	N-Nitrosodiphenylamine	14	ug/L
	Naphthalene	1.6	ug/L
	Perylene	1.5	ug/L
	Phenanthrene	0.4	ug/L
	Pyrene	0.4	ug/L
20	2,3,4,5-Tetrachlorophenol	0.4	ug/L
	2,3,4,6-Tetrachlorophenol	2.8	ug/L
	2,3,4-Trichlorophenol	0.6	ug/L
	2,3,5,6-Tetrachlorophenol	1.6	ug/L
	2,3,5-Trichlorophenol	1.3	ug/L
	2,4,5-Trichlorophenol	1.3	ug/L
	2,4,6-Trichlorophenol	1.3	ug/L
	2,4-Dichlorophenol	1.7	ug/L
	2,4-Dimethylphenol	7.3	ug/L
	2,4-Dinitrophenol	42	ug/L

ATG	PARAMETER	RMDL	UNIT
20	2,6-Dichlorophenol	2	ug/L
	2-Chlorophenol	3.7	ug/L
	4,6-Dinitro-o-cresol	24	ug/L
	4-Chloro-3-methylphenol	1.5	ug/L
	4-Nitrophenol	1.4	ug/L
	Pentachlorophenol	1.3	ug/L
	Phenol	2.4	ug/L
	m-Cresol	3.4	ug/L
	o-Cresol	3.7	ug/L
	p-Cresol	3.5	ug/L
23	1,2,3,4-Tetrachlorobenzene	10	ng/L
	1,2,3,5-Tetrachlorobenzene	10	ng/L
	1,2,3-Trichlorobenzene	10	ng/L
	1,2,4,5-Tetrachlorobenzene	10	
	1,2,4-Trichlorobenzene	10	ng/L
	2,4,5-Trichlorotoluene	10	ng/L
	Hexachlorobenzene	10	ng/L
	Hexachlorobutadiene	10	ng/L
	Hexachlorocyclopentadiene	10	ng/L
	Hexachloroethane	10	ng/L
	Octachlorostyrene	10	ng/L
	Pentachlorobenzene	10	ng/L
24	2,3,7,8 TCDD	20	pg/L
	Total T4CDD	20	pg/L
	Total T4CDF	15	pg/L
	Total P5CDD	20	pg/L
	Total P5CDF	15	pg/L
	Total H6CDD	30	pg/L
	Total H6CDF	20	pg/L
	Total H7CDD	30	pg/L
	Total H7CDF	30	pg/L
	Total O8CDD	30	pg/L
	Total O8CDF	30	pg/L
25	Oil and grease	1	mg/L
27	PCBT	0.1	ug/L
I1	Chloride	2	mg/L
I2	Fluoride	0.1	mg/L
I3	Sulphate	5	mg/L

APPENDIX C

QA/QC WORKING TABLES

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TABLE C1.1 Detection Frequencies and Concentration Ratios for Found Parameters Monitored Daily, Thrice-Weekly or Weekly in Effluent

Parameter	Number of Observations	Class	Frequency of Detection (%) >RMDL	>2RMDL	>5RMDL	Concentration Ratios (1) Minimum	Maximum	Average
DOC	52	FH	100	100	65	3.40	62.00	6.77
Aluminum	52	FM	96	83	46	.32	643.33	19.44
Mercury	52	FL	60	19	2	.50	7.00	1.26
Oil and grease	52	IL	27	10	2	1.00	5.00	1.21
Total suspended solids	353	IL	22	9	1	.10	11.60	.91
Total phosphorus	364	IL	15	3	1	.10	26.68	.81
TOC	52	IM	4	4	2	.34	6.20	.69

TABLE C1.2 Detection Frequencies and Concentration Ratios For Found Parameters Monitored Monthly, Quarterly or Semi-Annually in Effluent

Parameter	Number of Observations	Class	Frequency of Detection (%) >RMDL	>2RMDL	>5RMDL	Concentration Ratios (1) Minimum	Maximum	Average
Chloride	2	FH	100	100	100	9.05	13.50	11.28
Chloroform	2	FH	100	100	100	5.29	7.71	6.50
Sulphate	2	FM	100	100	50	4.80	7.80	6.30
Dibromochloromethane	2	FM	100	100	0	2.45	3.09	2.77
Strontium	18	FH	94	94	94	.10	13.00	9.03
Phenolics (4AAP)	12	FL	67	50	8	.30	5.10	1.91
Nitrate+Nitrite	12	FL	58	17	0	.76	4.20	1.48
Zinc	12	IL	33	0	0	.30	1.50	.73
Chromium (hexavalent)	7	IL	14	0	0	.31	1.60	.52
Copper	12	IL	8	0	0	.30	1.30	.58
Boron	18	IH	6	6	6	.10	5.20	.76
Chromium	12	NO	0	0	0	.10	.45	.23
Total Kjeldahl Nitrogen	12	NO	0	0	0	.38	.68	.48
Vanadium	12	NO	0	0	0	.13	.27	.16

NOTE: (1) Concentration Ratio = Concentration Divided by Regulation Method Detection Limit

TABLE C1.3 Detection Frequencies and Concentration Ratios for Found Parameters in Travelling Blanks

Parameter	Number of Observations	Frequency of Detection >RMDL (%)	Concentration Ratios (1) Minimum	Maximum	Average
DOC	3	33	.23	2.60	1.02
Oil and grease	3	0	1.00	1.00	1.00
Boron	2	0	.60	.60	.60
Mercury	3	0	.56	.56	.56
Zinc	3	0	.30	1.00	.53
TOC	3	33	.10	1.26	.49
Strontium	2	0	.34	.50	.42
Copper	3	0	.30	.60	.40
Aluminum	3	0	.32	.53	.39
Chromium (hexavalent)	3	0	.31	.31	.31
Phenolics (4AAP)	3	0	.30	.30	.30
Total phosphorus	20	0	.11	.32	.30
Chromium	3	0	.10	.45	.22
Vanadium	3	0	.13	.17	.14
Nitrate+Nitrite	3	0	.10	.10	.10
Total Kjeldahl Nitrogen	3	0	.10	.10	.10

NOTE: (1) Concentration Ratio = Concentration Divided by Regulation Method Detection Limit

TABLE C1.4 Absolute Value of the Difference Between Effluent Monitoring and Duplicate Sample Concentration Divided by the Regulation Method Detection Limit for Found Parameters

Parameter	Number of Observations	Difference Ratios (1) Minimum	Maximum	Average
DOC	4	.20	1.40	.65
Aluminum	4	.03	1.33	.59
Phenolics (4AAP)	4	.00	.70	.25
Strontium	3	.00	.50	.20
Mercury	4	.00	.60	.18
Copper	4	.00	.50	.18
Total phosphorus	46	.00	.90	.13
Total suspended solids	18	.00	1.31	.11
Zinc	4	.00	.10	.03
TOC	4	.00	.04	.02
Total Kjeldahl Nitrogen	4	.00	.04	.02
Vanadium	4	.00	.04	.01
Boron	3	.00	.02	.01
Chromium	4	.00	.00	.00
Chromium (hexavalent)	3	.00	.00	.00
Nitrate+Nitrite	4	.00	.00	.00
Oil and grease	4	.00	.00	.00

TABLE C1.5 Absolute Value of the Difference Between Effluent Monitoring and Split Sample Concentration Divided by the Regulation Method Detection Limit for Found Parameters

Parameter	Number of Observations	Difference Ratios (1) Minimum	Maximum	Average
Total phosphorus	62	.00	1.00	.09

TABLE C1.6 Absolute Value of the Difference Between Uncorrected Monitoring Sample Concentration and Corrected Monitoring Sample Concentration Divided by the Regulation Method Detection Limit for Found Parameters

Parameter	Number of Observations	Difference Ratios (1) Minimum	Maximum	Average
Chloroform	2	.00	.00	.00
Dibromochloromethane	2	.00	.00	.00

NOTE: (1) Difference Ratio = Absolute Value of the Difference in Concentration Divided by the Regulation Method Detection Limit

TABLE C1.7 Detection Frequencies and Concentration Ratios for Found Parameters Monitored Daily, Thrice-Weekly or Weekly in Effluent

Parameter	Number of Observations	Class	Frequency of Detection (%) >RMDL	>2RMDL	>5RMDL	Concentration Ratios (1) Minimum	Maximum	Average
DOC	52	FH	100	100	60	3.40	13.20	5.64
Aluminum	52	FM	96	81	42	.32	520.00	16.79
Mercury	52	IL	37	6	2	.56	9.00	.99
Oil and grease	52	IL	27	12	0	1.00	4.00	1.25
Total suspended solids	324	IL	19	7	1	.10	8.70	.82
TOC	52	IL	6	0	0	.34	1.28	.56
Total phosphorus	361	IL	6	1	0	.10	2.80	.59

TABLE C1.8 Detection Frequencies and Concentration Ratios For Found Parameters Monitored Monthly, Quarterly or Semi-Annually in Effluent

Parameter	Number of Observations	Class	Frequency of Detection (%) >RMDL	>2RMDL	>5RMDL	Concentration Ratios (1) Minimum	Maximum	Average
Chloride	2	FH	100	100	100	8.45	11.50	9.98
Chloroform	2	FH	100	100	100	5.86	6.43	6.14
Sulphate	2	FM	100	100	50	4.60	6.80	5.70
Dibromochloromethane	2	FM	100	100	0	2.45	3.27	2.86
Strontium	18	FH	94	94	94	.10	11.50	8.73
Zinc	12	FL	67	25	0	.30	2.70	1.27
Nitrate+Nitrite	12	FL	67	17	0	.72	4.08	1.42
Phenolics (4AAP)	12	IL	25	8	0	.20	2.55	.68
Copper	12	IL	17	8	0	.30	2.10	.67
Chromium (hexavalent)	7	IL	14	0	0	.31	1.60	.52
Boron	17	IH	12	12	12	.10	6.80	1.12
Chromium	12	NO	0	0	0	.10	.50	.23
Total Kjeldahl Nitrogen	12	NO	0	0	0	.32	.98	.48
Vanadium	12	NO	0	0	0	.13	.20	.15

NOTE: (1) Concentration Ratio = Concentration Divided by Regulation Method Detection Limit

TABLE C1.9 Detection Frequencies and Concentration Ratios for Found Parameters in Travelling Blanks

Parameter	Number of Observations	Frequency of Detection >RMDL (%)	Concentration Ratios (1) Minimum	Maximum	Average
Oil and grease	1	0	1.00	1.00	1.00
Boron	1	0	.60	.60	.60
Mercury	1	0	.56	.56	.56
Phenolics (4AAP)	1	0	.40	.40	.40
Strontium	1	0	.34	.34	.34
Aluminum	1	0	.32	.32	.32
Copper	1	0	.30	.30	.30
Zinc	1	0	.30	.30	.30
DOC	1	0	.23	.23	.23
Total Kjeldahl Nitrogen	1	0	.14	.14	.14
Total phosphorus	3	0	.10	.17	.13
Vanadium	1	0	.13	.13	.13
Chromium	1	0	.10	.10	.10
Nitrate+Nitrite	1	0	.10	.10	.10
TOC	1	0	.10	.10	.10

NOTE: (1) Concentration Ratio = Concentration Divided by Regulation Method Detection Limit

TABLE C1.10 Absolute Value of the Difference Between Effluent Monitoring and Split Sample Concentration Divided by the Regulation Method Detection Limit for Found Parameters

Parameter	Number of Observations	Difference Ratios (1) Minimum	Maximum	Average
Total phosphorus	31	.00	.37	.03

TABLE C1.12 Absolute Value of the Difference Between Uncorrected Monitoring Sample Concentration and Corrected Monitoring Sample Concentration Divided by the Regulation Method Detection Limit for Found Parameters

Parameter	Number of Observations	Difference Ratios (1) Minimum	Maximum	Average
Chloroform	2	.00	.00	.00
Dibromochloromethane	2	.00	.00	.00

NOTE: (1) Difference Ratio = Absolute Value of the Difference in Concentration Divided by the Regulation Method Detection Limit

TABLE C2.1 Detection Frequencies and Concentration Ratios for Found Parameters Monitored Daily, Thrice-Weekly or Weekly in Effluent

Parameter	Number of Observations	Class	Frequency of Detection (%) >RMDL	>2RMDL	>5RMDL	Concentration Ratios (1) Minimum	Maximum	Average
Carbon tetrachloride	153	FH	100	100	100	15.38	2,646.15	558.20
Chloroform	153	FH	100	100	100	84.29	171,428.57	6,608.52
Methylene chloride	153	FH	100	100	100	6.62	10,000.00	300.78
Toluene	155	FH	100	100	100	5.60	5,160.00	203.60
Trichlorofluoromethane	153	FH	100	100	100	20.00	16,000.00	1,237.11
1,1,2,2-Tetrachloroethane	51	FH	100	96	82	1.47	146.51	30.10
DOC	155	FH	98	95	63	.20	678.00	29.08
Arsenic	155	FH	98	94	74	.40	1,582.00	40.60
Zinc	52	FM	87	77	40	1.00	107.00	7.10
Total suspended solids	361	FM	82	68	35	.20	15,402.00	49.10
Oil and grease	52	FL	75	50	13	1.00	16.00	2.93
Antimony	155	FM	66	61	50	.20	1,188.00	49.77
TOC	95	FL	53	29	15	.18	68.32	4.44
Phenolics (4AAP)	52	FL	50	33	17	.50	17.50	2.99
Mercury	52	FL	44	29	8	1.00	52.00	2.96
Fluoride	155	IL	12	6	1	.10	9.08	.49

NOTE: (1) Concentration Ratio = Concentration Divided by Regulation Method Detection Limit

TABLE C2.2 Detection Frequencies and Concentration Ratios For Found Parameters Monitored Monthly, Quarterly or Semi-Annually in Effluent

Parameter	Number of Observations	Class	Frequency of Detection (%) >RMDL	>2RMDL	>5RMDL	Concentration Ratios (1) Minimum	Maximum	Average
1,1,2-Trichloroethane	12	FH	100	100	100	14.33	700.00	208.20
1,2-Dichlorobenzene	12	FH	100	100	100	12.14	750.00	175.48
1,2-Dichloroethane	12	FH	100	100	100	10.75	525.00	128.44
1,3-Dichlorobenzene	12	FH	100	100	100	15.45	1,145.45	259.92
1,4-Dichlorobenzene	12	FH	100	100	100	5.29	1,235.29	249.85
Acrolein	4	FH	100	100	100	53.75	525.00	277.81
Acrylonitrile	4	FH	100	100	100	25.60	250.00	137.41
Benzene	12	FH	100	100	100	8.00	840.00	183.17
Bromomethane	12	FH	100	100	100	11.62	1,816.22	378.13
Chloride	4	FH	100	100	100	38.50	652.00	243.88
Chlorobenzene	12	FH	100	100	100	12.29	600.00	146.79
Cis-1,3-Dichloropropylene	12	FH	100	100	100	6.14	1,500.00	340.99
Dibromochloromethane	12	FH	100	100	100	7.82	381.82	123.71
Ethylene dibromide	12	FH	100	100	100	8.60	420.00	102.75
Strontium	12	FH	100	100	100	7.00	85.00	30.33
Styrene	12	FH	100	100	100	43.00	2,100.00	535.83
Sulphate	4	FH	100	100	100	6.00	15.00	10.95
Tetrachloroethylene	12	FH	100	100	100	7.82	381.82	123.71
Trans-1,2-Dichloroethylene	12	FH	100	100	100	6.14	300.00	81.31
Trans-1,3-Dichloropropylene	12	FH	100	100	100	6.14	300.00	81.31
Trichloroethylene	12	FH	100	100	100	6.84	552.63	123.46
m-Xylene and p-Xylene	12	FH	100	100	100	7.82	381.82	93.41
o-Xylene	12	FH	100	100	100	17.20	840.00	272.17
1,1-Dichloroethane	12	FH	100	100	92	5.00	525.00	114.48
1,2-Dichloropropane	12	FH	100	100	92	4.44	466.67	101.76
1,1-Dichloroethylene	12	FH	100	100	83	3.07	150.00	40.65
Chloromethane	12	FH	100	100	75	2.32	116.22	51.78
Vinyl chloride	12	FH	100	100	75	2.15	107.50	47.90
Bromoform	12	FH	100	100	67	2.32	113.51	30.77
Nitrate+Nitrite	12	FM	100	83	17	1.44	7.04	3.52
Hexachloroethane	12	FH	92	92	92	.50	330.00	108.70
1,2,4-Trichlorobenzene	12	FH	92	92	75	1.00	420.00	107.53
Hexachlorobenzene	12	FH	83	83	83	.10	1,600.00	203.39
Octachlorodibenzofuran	12	FH	83	83	83	.67	326.67	59.33
Aluminum	12	FH	83	83	67	.33	71.67	16.17
Hexachlorobutadiene	12	FM	83	83	42	.50	50.00	20.52
Octachlorodibenzo-p-dioxin	12	FM	83	75	50	.67	16.33	6.57
2,4,5-Trichlorotoluene	12	FH	75	75	75	1.00	100.00	44.52
Bis(2-ethylhexyl) phthalate	4	FM	75	75	25	.68	20.45	7.24
Boron	12	FH	75	67	58	.10	100.60	36.11
Hexachlorocyclopentadiene	12	FM	75	67	50	.50	100.00	32.52
1,2,3,4-Tetrachlorobenzene	12	FM	75	67	42	.50	50.00	21.93
1,2,3-Trichlorobenzene	12	FH	67	67	67	1.00	100.00	36.84
Octachlorostyrene	12	FH	67	67	58	.10	51.70	9.28
1,2,3,5-Tetrachlorobenzene	12	FM	67	67	42	.50	50.00	18.50
1,2,4,5-Tetrachlorobenzene	12	FM	67	67	42	.50	50.00	18.53
Pentachlorobenzene	12	FM	67	67	42	.50	50.00	18.29
Cadmium	12	FL	50	50	42	.50	28.00	4.92
Total H7CDF	12	FL	50	33	17	.13	13.67	2.67
COD	4	FL	50	25	0	.60	2.30	1.23
Total Kjeldahl Nitrogen	12	FL	42	17	0	.12	2.20	1.04
Chromium	12	IM	33	25	0	1.00	3.50	1.46
Copper	12	IL	33	17	8	1.00	6.00	1.50
Total H7CDD	12	IL	33	8	0	.33	2.87	1.01
Ammonia plus Ammonium	12	IL	25	0	0	.10	1.32	.60

TABLE C2.2 (cont'd) Detection Frequencies and Concentration Ratios For Found Parameters Monitored Monthly, Quarterly or Semi-Annually in Effluent

Parameter	Number of Observations	Class	Frequency of Detection (%) >RMDL	>2RMDL	>5RMDL	Concentration Ratios (1) Minimum	Maximum	Average
Total phosphorus	12	IL	25	0	0	.10	1.80	.57
Nickel	12	IL	17	8	0	1.00	4.50	1.33
Total TCDD	12	IL	17	8	0	.25	3.00	.88
Molybdenum	12	IH	8	8	8	1.00	29.50	3.38
Sulphide	12	IL	8	0	0	1.00	1.00	1.00

NOTE: (1) Concentration Ratio = Concentration Divided by Regulation Method Detection Limit

TABLE C2.3A Detection Frequencies and Concentration Ratios for Found Parameters in Travelling Blanks

Parameter	Number of Observations	Frequency of Detection >RMDL (%)	Concentration Ratios (1) Minimum	Maximum	Average
Zinc	4	75	1.00	8.00	3.00
Toluene	12	25	.12	20.00	2.34
Methylene chloride	12	33	.15	8.46	1.52
Copper	4	25	1.00	2.00	1.25
Oil and grease	4	25	1.00	2.00	1.25
Trichlorofluoromethane	12	17	.20	3.00	1.10
1,2,3-Trichlorobenzene	4	0	1.00	1.00	1.00
1,2,4-Trichlorobenzene	4	0	1.00	1.00	1.00
2,4,5-Trichlorotoluene	4	0	1.00	1.00	1.00
Chromium	4	0	1.00	1.00	1.00
Mercury	4	25	1.00	1.00	1.00
Molybdenum	4	0	1.00	1.00	1.00
Nickel	4	0	1.00	1.00	1.00
Octachlorodibenzo-p-dioxin	4	25	.67	1.33	1.00
Strontium	4	0	1.00	1.00	1.00
Sulphide	4	0	1.00	1.00	1.00
Phenolics (4AAP)	4	0	.50	1.00	.88
Arsenic	12	17	.40	2.20	.83
Octachlorodibenzofuran	4	0	.67	1.00	.83
Styrene	4	25	.52	1.20	.81
Total H7CDD	4	25	.33	1.33	.75
Total TCDD	4	0	.50	1.00	.75
Total phosphorus	4	25	.10	2.50	.72
Hexachlorocyclopentadiene	4	0	.50	1.00	.63
Total H7CDF	4	0	.33	.83	.63
1,2,3,4-Tetrachlorobenzene	4	0	.50	.50	.50
1,2,3,5-Tetrachlorobenzene	4	0	.50	.50	.50
1,2,4,5-Tetrachlorobenzene	4	0	.50	.50	.50
Cadmium	4	0	.50	.50	.50
Hexachlorobutadiene	4	0	.50	.50	.50
Hexachloroethane	4	0	.50	.50	.50
Pentachlorobenzene	4	0	.50	.50	.50
DOC	12	8	.20	2.20	.45
o-Xylene	4	0	.20	1.00	.45
Dibromochloromethane	4	0	.18	.55	.43
Aluminum	4	0	.33	.67	.42
1,2-Dichlorobenzene	4	0	.29	.50	.41
Total Kjeldahl Nitrogen	4	0	.16	.50	.41
Cis-1,3-Dichloropropylene	4	0	.14	.71	.38

TABLE C2.3A (cont'd) Detection Frequencies and Concentration Ratios for Found Parameters in Travelling Blanks

Parameter	Number of Observations	Frequency of Detection >RMDL (%)	Concentration Ratios (1) Minimum	Maximum	Average
Boron	4	0	.20	.40	.35
Bromomethane	4	0	.10	.86	.33
1,1,2-Trichloroethane	4	0	.17	.67	.33
1,3-Dichlorobenzene	4	0	.18	.55	.32
Tetrachloroethylene	4	0	.18	.45	.30
Carbon tetrachloride	12	0	.15	.31	.29
Chloroform	12	8	.14	1.43	.26
Benzene	4	0	.20	.40	.25
Total suspended solids	10	0	.20	.60	.24
1,4-Dichlorobenzene	4	0	.12	.59	.24
Antimony	12	0	.20	.60	.23
1,2-Dichloroethane	4	0	.19	.25	.22
Chlorobenzene	4	0	.14	.29	.21
Ethylene dibromide	4	0	.20	.20	.20
Nitrate+Nitrite	4	0	.10	.28	.19
1,2-Dichloropropane	4	0	.11	.22	.17
1,1,2,2-Tetrachloroethane	4	0	.10	.19	.16
TOC	11	0	.10	.38	.16
1,1-Dichloroethane	4	0	.13	.25	.16
Trichloroethylene	4	0	.10	.26	.16
Trans-1,3-Dichloropropylene	4	0	.11	.21	.14
Chloromethane	4	0	.10	.27	.14
m-Xylene and p-Xylene	4	0	.10	.18	.14
Ammonia plus Ammonium	4	0	.12	.20	.14
Trans-1,2-Dichloroethylene	4	0	.10	.21	.14
Vinyl chloride	4	0	.10	.25	.14
1,1-Dichloroethylene	4	0	.10	.11	.10
Fluoride	11	0	.10	.10	.10
Hexachlorobenzene	4	0	.10	.10	.10
Octachlorostyrene	4	0	.10	.10	.10
Bromoform	4	0	.10	.10	.10

NOTE: (1) Concentration Ratio = Concentration Divided by Regulation Method Detection Limit

TABLE C2.3B Absolute Value of the Difference Between Uncorrected Travelling Blank Concentration and Corrected Travelling Blank Concentration Divided by the Regulation Method Detection Limit for Found Parameters

Parameter	Number of Observations	Difference Ratios (1) Minimum	Maximum	Average
Methylene chloride	12	.00	.77	.21
Benzene	4	.00	.20	.05
1,1,2,2-Tetrachloroethane	4	.00	.00	.00
1,1,2-Trichloroethane	4	.00	.00	.00
1,1-Dichloroethane	4	.00	.00	.00
1,1-Dichloroethylene	4	.00	.00	.00
1,2-Dichlorobenzene	4	.00	.00	.00
1,2-Dichloroethane	4	.00	.00	.00
1,2-Dichloropropane	4	.00	.00	.00
1,3-Dichlorobenzene	4	.00	.00	.00
1,4-Dichlorobenzene	4	.00	.00	.00
Bromoform	4	.00	.00	.00
Bromomethane	4	.00	.00	.00
Carbon tetrachloride	12	.00	.00	.00
Chlorobenzene	4	.00	.00	.00
Chloroform	12	.00	.00	.00
Chloromethane	4	.00	.00	.00
Cis-1,3-Dichloropropylene	4	.00	.00	.00
Dibromochloromethane	4	.00	.00	.00
Ethylene dibromide	4	.00	.00	.00
Styrene	4	.00	.00	.00
Tetrachloroethylene	4	.00	.00	.00
Toluene	12	.00	.00	.00
Trans-1,2-Dichloroethylene	4	.00	.00	.00
Trans-1,3-Dichloropropylene	4	.00	.00	.00
Trichloroethylene	4	.00	.00	.00
Trichlorofluoromethane	12	.00	.00	.00
Vinyl chloride	4	.00	.00	.00
m-Xylene and p-Xylene	4	.00	.00	.00
o-Xylene	4	.00	.00	.00

NOTE: (1) Difference Ratio = Absolute Value of the Difference in Concentration Divided by the Regulation Method Detection Limit

TABLE C2.4A Range of Recoveries and Ratio of Spiked Quantity to the Regulation Method Detection Limit for Found Parameters (1)

ATG	Parameter	Number of Observations	Recovery (2) (%) Minimum	Maximum	Average	SPIKE/RMDL (3)
16	1,1,2,2-Tetrachloroethane	3	43	97	76	.5
16	1,1,2-Trichloroethane	3	55	88	76	3.6
16	1,1-Dichloroethane	3	75	95	88	2.7
16	1,1-Dichloroethylene	3	67	92	83	.8
16	1,2-Dichlorobenzene	3	62	99	78	1.5
16	1,2-Dichloroethane	3	80	100	90	2.7
16	1,2-Dichloropropane	3	75	94	85	2.4
16	1,3-Dichlorobenzene	3	56	103	76	2.0
16	1,4-Dichlorobenzene	3	47	116	79	1.3
16	Bromoform	3	84	105	91	.6
16	Bromomethane	3	66	87	79	.6
16	Carbon tetrachloride	11	68	124	94	1.7
16	Chlorobenzene	3	69	91	81	3.1
16	Chloroform	11	70	130	99	3.1
16	Chloromethane	3	81	109	100	.6
16	Cis-1,3-Dichloropropylene	3	63	69	65	1.9
16	Dibromochloromethane	3	84	101	91	2.0
16	Ethylene dibromide	3	84	97	89	2.4
16	Methylene chloride	11	7	***	285	1.7
16	Tetrachloroethylene	3	66	99	81	2.0
16	Trans-1,2-Dichloroethylene	3	64	90	81	1.5
16	Trans-1,3-Dichloropropylene	3	58	72	66	1.2
16	Trichloroethylene	3	79	109	96	1.1
16	Trichlorofluoromethane	11	85	132	102	2.2
16	Vinyl chloride	3	74	94	85	.5
17	Benzene	3	90	101	95	4.3
17	Styrene	3	69	83	75	3.9
17	Toluene	11	78	205	120	4.3
17	m-Xylene and p-Xylene	3	75	101	88	2.0
17	o-Xylene	3	73	95	85	4.3
23	1,2,3,4-Tetrachlorobenzene	4	64	85	74	12.8
23	1,2,3,5-Tetrachlorobenzene	4	52	72	61	13.2
23	1,2,3-Trichlorobenzene	4	65	85	72	19.5
23	1,2,4,5-Tetrachlorobenzene	4	39	83	62	14.2
23	1,2,4-Trichlorobenzene	4	58	75	65	18.5
23	2,4,5-Trichlorotoluene	4	53	79	72	19.5
23	Hexachlorobenzene	4	55	89	71	5.6
23	Hexachlorobutadiene	4	57	73	65	4.7
23	Hexachlorocyclopentadiene	4	38	80	61	4.9
23	Hexachloroethane	4	47	87	66	5.7
23	Octachlorostyrene	4	44	109	74	4.8
23	Pentachlorobenzene	4	57	105	79	10.7

NOTE: (1) - Only those parameters for which travelling spikes were required are presented.

(2) - Recovery = Actual value divided by expected value X 100%

(3) - SPIKE/RMDL = Expected value of the spiked sample divided by Regulation Method Detection Limit

TABLE C2.4B Absolute Value of the Difference Between Uncorrected Travelling Spiked Blank Sample Concentration and Corrected Travelling Spiked Blank Sample Concentration Divided by the Regulation Method Detection Limit for Found Parameters

Parameter	Number of Observations	Difference Ratios (1) Minimum	Maximum	Average
Methylene chloride	12	.00	.77	.21
Benzene	4	.00	.20	.05
1,1,2,2-Tetrachloroethane	4	.00	.00	.00
1,1,2-Trichloroethane	4	.00	.00	.00
1,1-Dichloroethane	4	.00	.00	.00
1,1-Dichloroethylene	4	.00	.00	.00
1,2-Dichlorobenzene	4	.00	.00	.00
1,2-Dichloroethane	4	.00	.00	.00
1,2-Dichloropropane	4	.00	.00	.00
1,3-Dichlorobenzene	4	.00	.00	.00
1,4-Dichlorobenzene	4	.00	.00	.00
Bromoform	4	.00	.00	.00
Bromomethane	4	.00	.00	.00
Carbon tetrachloride	12	.00	.00	.00
Chlorobenzene	4	.00	.00	.00
Chloroform	12	.00	.00	.00
Chloromethane	4	.00	.00	.00
Cis-1,3-Dichloropropylene	4	.00	.00	.00
Dibromochloromethane	4	.00	.00	.00
Ethylene dibromide	4	.00	.00	.00
Styrene	4	.00	.00	.00
Tetrachloroethylene	4	.00	.00	.00
Toluene	12	.00	.00	.00
Trans-1,2-Dichloroethylene	4	.00	.00	.00
Trans-1,3-Dichloropropylene	4	.00	.00	.00
Trichloroethylene	4	.00	.00	.00
Trichlorofluoromethane	12	.00	.00	.00
Vinyl chloride	4	.00	.00	.00
m-Xylene and p-Xylene	4	.00	.00	.00
o-Xylene	4	.00	.00	.00

NOTE: (1) Difference Ratio = Absolute Value of the Difference in Concentration Divided by the Regulation Method Detection Limit

TABLE C2.5A Range of Recoveries and Ratio of Spiked Quantity to the Regulation Method Detection Limit for Spiked Samples for Found Parameters (1)

ATG	Parameter	Number of Observations	Recovery (2) (%) Minimum	Maximum	Average	SPIKE/RMDL (3)
16	1,1,2,2-Tetrachloroethane	4	59	100	78	.5
16	1,1,2-Trichloroethane	4	9	105	79	3.7
16	1,1-Dichloroethane	4	76	108	97	2.8
16	1,1-Dichloroethylene	4	49	105	88	.8
16	1,2-Dichlorobenzene	4	56	107	90	1.6
16	1,2-Dichloroethane	4	85	112	99	2.8
16	1,2-Dichloropropane	4	81	117	100	2.5
16	1,3-Dichlorobenzene	4	58	110	89	2.0
16	1,4-Dichlorobenzene	4	66	128	97	1.3
16	Bromoform	4	81	109	102	.6
16	Bromomethane	4	20	138	85	.6
16	Carbon tetrachloride	12	38	119	90	1.7
16	Chlorobenzene	4	58	106	91	3.2
16	Chloroform	12	69	123	101	3.1
16	Chloromethane	4	16	88	52	.6
16	Cis-1,3-Dichloropropylene	4	5	36	21	1.9
16	Dibromochloromethane	4	81	108	95	2.0
16	Ethylene dibromide	4	67	110	92	2.4
16	Methylene chloride	12	6	269	127	1.7
16	Tetrachloroethylene	4	59	106	91	2.0
16	Trans-1,2-Dichloroethylene	4	59	103	90	1.6
16	Trans-1,3-Dichloropropylene	4	10	46	21	1.2
16	Trichloroethylene	4	66	157	112	1.2
16	Trichlorofluoromethane	12	38	118	89	2.2
16	Vinyl chloride	4	37	132	91	.6
17	Benzene	4	91	129	107	4.4
17	Styrene	4	51	110	90	4.3
17	Toluene	12	84	281	149	4.3
17	m-Xylene and p-Xylene	4	98	128	111	2.0
17	o-Xylene	4	78	108	98	4.4
23	1,2,3,4-Tetrachlorobenzene	4	39	76	63	12.8
23	1,2,3,5-Tetrachlorobenzene	4	39	70	57	13.2
23	1,2,3-Trichlorobenzene	4	15	75	54	19.5
23	1,2,4,5-Tetrachlorobenzene	4	39	74	58	14.2
23	1,2,4-Trichlorobenzene	4	41	104	65	18.5
23	2,4,5-Trichlorotoluene	4	40	69	61	19.5
23	Hexachlorobenzene	4	36	104	67	5.6
23	Hexachlorobutadiene	4	45	126	71	4.7
23	Hexachlorocyclopentadiene	4	36	66	48	4.9
23	Hexachloroethane	4	37	67	54	5.7
23	Octachlorostyrene	4	38	87	60	4.8
23	Pentachlorobenzene	4	43	106	68	10.7

NOTE: (1) - Only those parameters for which spiked samples were required are presented.

(2) - Recovery = Actual value divided by expected value X 100%

(3) - SPIKE/RMDL = Expected value of the spiked sample divided by Regulation Method Detection Limit

TABLE C2.5B Absolute Value of the Difference Between Uncorrected Spiked Sample Concentration and Corrected Spiked Sample Concentration Divided by the Regulation Method Detection Limit for Found Parameters

ATG	Parameter	Number of Observations	Recovery (2) (%) Minimum	Maximum	Average	SPIKE/RMDL (3)
	Methylene chloride	12	.15		1.72	.56
	Toluene	12	.00		.48	.23
	Trans-1,3-Dichloropropylene	4	.00		.75	.21
	1,1,2-Trichloroethane	4	.00		.40	.18
	Cis-1,3-Dichloropropylene	4	.00		.61	.16
	Ethylene dibromide	4	.00		.26	.13
	1,3-Dichlorobenzene	4	.00		.25	.10
	Benzene	4	.00		.24	.10
	Styrene	4	.00		.22	.09
	1,2-Dichloroethane	4	.00		.20	.09
	Dibromochloromethane	4	.00		.16	.08
	Chlorobenzene	4	.00		.16	.07
	o-Xylene	4	.00		.18	.07
	Chloroform	12	.00		.14	.07
	1,2-Dichlorobenzene	4	.00		.11	.06
	1,2-Dichloropropane	4	.00		.10	.04
	1,1,2,2-Tetrachloroethane	4	.00		.11	.04
	m-Xylene and p-Xylene	4	.00		.08	.03
	1,4-Dichlorobenzene	4	.00		.12	.03
	Bromoform	4	.00		.06	.03
	Tetrachloroethylene	4	.00		.03	.01
	1,1-Dichloroethane	4	.00		.02	.01
	Trichlorofluoromethane	12	.00		.08	.01
	Trichloroethylene	4	.00		.01	.01
	Trans-1,2-Dichloroethylene	4	.00		.01	.00
	Chloromethane	4	.00		.01	.00
	Vinyl chloride	4	.00		.01	.00
	Carbon tetrachloride	12	.00		.01	.00
	1,1-Dichloroethylene	4	.00		.00	.00
	Bromomethane	4	.00		.00	.00

NOTE: (1) Difference Ratio = Absolute Value of the Difference in Concentration Divided by the Regulation Method Detection Limit

TABLE C2.6A Absolute Value of the Difference Between Effluent Monitoring and Duplicate Sample Concentration Divided by the Regulation Method Detection Limit for Found Parameters

Parameter	Number of Observations	Difference Ratios (1) Minimum	Maximum	Average
Chloroform	11	.00	2,857.14	423.38
Methylene chloride	11	.00	553.85	122.80
Trichlorofluoromethane	11	.00	400.00	104.55
Hexachlorobenzene	4	.00	258.00	72.30
Octachlorodibenzofuran	4	.33	216.67	55.75
Carbon tetrachloride	11	.00	230.77	48.95
Styrene	4	.00	172.00	43.00
Bromomethane	4	.00	148.76	37.19
Cis-1,3-Dichloropropylene	4	.00	122.86	30.71
1,4-Dichlorobenzene	4	.00	101.18	25.29
1,3-Dichlorobenzene	4	.00	93.82	23.45
1,2,4-Trichlorobenzene	4	.00	66.00	19.03
Arsenic	3	.20	54.40	18.67
Benzene	4	.00	68.80	17.20
o-Xylene	4	.00	68.80	17.20
1,2-Dichlorobenzene	4	.00	61.43	15.36
1,1,2-Trichloroethane	4	.00	57.33	14.33
Antimony	3	3.60	19.20	13.87
Chlorobenzene	4	.00	49.14	12.29
Octachlorostyrene	4	.00	46.00	12.00
Trichloroethylene	4	.00	45.26	11.32
1,1-Dichloroethane	4	.00	43.00	10.75
1,2-Dichloroethane	4	.00	43.00	10.75
1,2,3,4-Tetrachlorobenzene	4	.00	38.70	9.68
1,2-Dichloropropane	4	.00	38.22	9.56
Ethylene dibromide	4	.00	34.40	8.60
Dibromochloromethane	4	.00	31.27	7.82
Tetrachloroethylene	4	.00	31.27	7.82
m-Xylene and p-Xylene	4	.00	31.27	7.82
Toluene	11	.00	68.80	6.25
Trans-1,2-Dichloroethylene	4	.00	24.57	6.14
Trans-1,3-Dichloropropylene	4	.00	24.57	6.14
1,1,2,2-Tetrachloroethane	4	.00	12.00	5.50
Boron	2	.00	10.60	5.30
Hexachloroethane	4	.00	14.40	5.10
Hexachlorobutadiene	4	.00	16.60	4.15
Cadmium	2	2.50	5.50	4.00
Octachlorodibenzo-p-dioxin	4	.33	11.00	3.17
1,1-Dichloroethylene	4	.00	12.29	3.07
Phenolics (4AAP)	2	.00	6.00	3.00
Bromoform	4	.00	9.30	2.32
Chloromethane	4	.00	9.30	2.32
Vinyl chloride	4	.00	8.60	2.15
1,2,3-Trichlorobenzene	4	.00	6.70	1.68
Zinc	2	1.00	2.00	1.50
2,4,5-Trichlorotoluene	4	.00	5.60	1.40
Chromium	2	1.00	1.50	1.25
1,2,4,5-Tetrachlorobenzene	4	.00	4.00	1.00
1,2,3,5-Tetrachlorobenzene	4	.00	3.70	.93
DOC	3	.00	1.80	.80
Strontium	2	.50	1.00	.75

TABLE C2.6A (cont'd) Absolute Value of the Difference Between Effluent Monitoring and Duplicate Sample Concentration Divided by the Regulation Method Detection Limit for Found Parameters

Parameter	Number of Observations	Difference Ratios (1) Minimum	Maximum	Average
Oil and grease	4	.00	2.00	.60
Copper	2	.00	1.00	.50
Mercury	2	.00	1.00	.50
Pentachlorobenzene	4	.00	1.60	.40
Ammonia plus Ammonium	2	.16	.60	.38
Nitrate+Nitrite	2	.24	.52	.38
Aluminum	2	.00	.67	.33
Total suspended solids	2	.20	.40	.30
TOC	2	.16	.36	.26
Molybdenum	2	.00	.50	.25
Nickel	2	.00	.50	.25
Total H7CDF	4	.00	.40	.25
Total H7CDD	4	.00	.60	.18
Hexachlorocyclopentadiene	4	.00	.50	.15
Total phosphorus	2	.10	.20	.15
Total TCDD	4	.00	.50	.13
Total Kjeldahl Nitrogen	2	.06	.08	.07
Fluoride	3	.00	.00	.00
Sulphide	4	.00	.00	.00

NOTE: (1) Difference Ratio = Absolute Value of the Difference in Concentration Divided by the Regulation Method Detection Limit

TABLE C2.6B Absolute Value of the Difference Between Uncorrected Duplicate Concentration and Corrected Duplicate Concentration Divided by the Regulation Method Detection Limit for Found Parameters

Parameter	Number of Observations	Difference Ratios (1) Minimum	Maximum	Average
Methylene chloride	11	.00	769.23	178.71
Chloroform	11	.00	1,428.57	145.45
Trichlorofluoromethane	11	.00	100.00	9.09
Carbon tetrachloride	11	.00	76.92	6.99
Benzene	4	.00	14.00	3.50
1,1,2,2-Tetrachloroethane	4	.00	.00	.00
1,1,2-Trichloroethane	4	.00	.00	.00
1,1-Dichloroethane	4	.00	.00	.00
1,1-Dichloroethylene	4	.00	.00	.00
1,2-Dichlorobenzene	4	.00	.00	.00
1,2-Dichloroethane	4	.00	.00	.00
1,2-Dichloropropane	4	.00	.00	.00
1,3-Dichlorobenzene	4	.00	.00	.00
1,4-Dichlorobenzene	4	.00	.00	.00
Bromoform	4	.00	.00	.00
Bromomethane	4	.00	.00	.00
Chlorobenzene	4	.00	.00	.00
Chloromethane	4	.00	.00	.00
Cis-1,3-Dichloropropylene	4	.00	.00	.00
Dibromochloromethane	4	.00	.00	.00
Ethylene dibromide	4	.00	.00	.00
Fluoride	1	.00	.00	.00

TABLE C2.6B (cont'd) Absolute Value of the Difference Between Uncorrected Duplicate Concentration and Corrected Duplicate Concentration Divided by the Regulation Method Detection Limit for Found Parameters

Parameter	Number of Observations	Difference Ratios (1) Minimum	Maximum	Average
Styrene	4	.00	.00	.00
Tetrachloroethylene	4	.00	.00	.00
Toluene	11	.00	.00	.00
Trans-1,2-Dichloroethylene	4	.00	.00	.00
Trans-1,3-Dichloropropylene	4	.00	.00	.00
Trichloroethylene	4	.00	.00	.00
Vinyl chloride	4	.00	.00	.00
m-Xylene and p-Xylene	4	.00	.00	.00
o-Xylene	4	.00	.00	.00

NOTE: (1) Difference Ratio = Absolute Value of the Difference in Concentration Divided by the Regulation Method Detection Limit

TABLE C2.7A Absolute Value of the Difference Between Effluent Monitoring and Split Sample Concentration Divided by the Regulation Method Detection Limit for Found Parameters

Parameter	Number of Observations	Difference Ratios (1) Minimum	Maximum	Average
Trichlorofluoromethane	1	150.00	150.00	150.00
Methylene chloride	1	54.62	54.62	54.62
Carbon tetrachloride	1	38.46	38.46	38.46
Antimony	9	.00	120.00	21.58
Strontium	2	12.00	28.00	20.00
Arsenic	9	.00	10.80	3.62
Aluminum	2	1.67	3.67	2.67
Boron	2	.80	3.40	2.10
Zinc	2	1.00	2.00	1.50
DOC	9	.00	4.00	.91
Nickel	2	.00	1.50	.75
Phenolics (4AAP)	2	.50	1.00	.75
Total suspended solids	10	.00	2.40	.62
Chromium	2	.00	.50	.25
Total Kjeldahl Nitrogen	2	.20	.30	.25
Nitrate+Nitrite	2	.12	.24	.18
Total phosphorus	2	.00	.30	.15
TOC	9	.04	.36	.12
Ammonia plus Ammonium	2	.00	.08	.04
Fluoride	9	.00	.02	.01
Cadmium	2	.00	.00	.00
Chloroform	1	.00	.00	.00
Copper	2	.00	.00	.00
Mercury	2	.00	.00	.00
Molybdenum	2	.00	.00	.00
Toluene	1	.00	.00	.00

NOTE: (1) Difference Ratio = Absolute Value of the Difference in Concentration Divided by the Regulation Method Detection Limit

TABLE C2.7B Absolute Value of the Difference Between Uncorrected Split Sample Concentration and Corrected Split Sample Concentration Divided by the Regulation Method Detection Limit for Found Parameters

Parameter	Number of Observations	Difference Ratios (1) Minimum	Maximum	Average
Methylene chloride	1	7.69	7.69	7.69
Carbon tetrachloride	1	.00	.00	.00
Chloroform	1	.00	.00	.00
Toluene	1	.00	.00	.00
Trichlorofluoromethane	1	.00	.00	.00

TABLE C2.8 Absolute Value of the Difference Between Uncorrected Monitoring Sample Concentration and Corrected Monitoring Sample Concentration Divided by the Regulation Method Detection Limit for Found Parameters

Parameter	Number of Observations	Difference Ratios (1) Minimum	Maximum	Average
Methylene chloride	153	.00	3,846.15	173.73
Chloroform	153	.00	1,428.57	17.04
Bis(2-ethylhexyl) phthalate	4	.45	24.55	7.30
Trichlorofluoromethane	153	.00	200.00	6.08
Toluene	155	.00	560.00	5.41
Benzene	12	.00	34.00	2.83
Cis-1,3-Dichloropropylene	12	.00	24.57	2.05
1,1,2,2-Tetrachloroethane	51	.00	2.33	.05
1,1,2-Trichloroethane	12	.00	.00	.00
1,1-Dichloroethane	12	.00	.00	.00
1,1-Dichloroethylene	12	.00	.00	.00
1,2-Dichlorobenzene	12	.00	.00	.00
1,2-Dichloroethane	12	.00	.00	.00
1,2-Dichloropropane	12	.00	.00	.00
1,3-Dichlorobenzene	12	.00	.00	.00
1,4-Dichlorobenzene	12	.00	.00	.00
Acrolein	4	.00	.00	.00
Acrylonitrile	4	.00	.00	.00
Bromoform	12	.00	.00	.00
Bromomethane	12	.00	.00	.00
Carbon tetrachloride	153	.00	.00	.00
Chlorobenzene	12	.00	.00	.00
Chloromethane	12	.00	.00	.00
Dibromochloromethane	12	.00	.00	.00
Ethylene dibromide	12	.00	.00	.00
Styrene	12	.00	.00	.00
Tetrachloroethylene	12	.00	.00	.00
Trans-1,2-Dichloroethylene	12	.00	.00	.00
Trans-1,3-Dichloropropylene	12	.00	.00	.00
Trichloroethylene	12	.00	.00	.00
Vinyl chloride	12	.00	.00	.00
m-Xylene and p-Xylene	12	.00	.00	.00
o-Xylene	12	.00	.00	.00

NOTE: (1) Difference Ratio = Absolute Value of the Difference in Concentration Divided by the Regulation Method Detection Limit

TABLE C3.1 Detection Frequencies and Concentration Ratios for Found Parameters Monitored Daily, Thrice-Weekly or Weekly in Effluent

Parameter	Number of Observations	Class	Frequency of Detection (%) >RMDL	>2RMDL	>5RMDL	Concentration Ratios (1) Minimum	Maximum	Average
Aluminum	52	FH	100	100	100	6.33	53.33	22.03
Chloride	158	FH	100	100	100	7.00	215.00	63.44
DOC	52	FM	100	96	48	1.60	26.00	6.10
Nitrate+Nitrite	51	FM	96	67	0	.10	4.40	2.42
Zinc	158	FM	89	81	46	.40	51.00	7.36
Total Kjeldahl Nitrogen	52	FL	42	10	0	.32	3.20	1.02
Oil and grease	52	FL	40	8	2	.96	10.00	1.36
Cyanide Total	52	IL	35	4	2	.20	7.40	.80
Total suspended solids	365	IL	18	3	0	.84	13.00	.98

TABLE C3.2 Detection Frequencies and Concentration Ratios For Found Parameters Monitored Monthly, Quarterly or Semi-Annually in Effluent

Parameter	Number of Observations	Class	Frequency of Detection (%) >RMDL	>2RMDL	>5RMDL	Concentration Ratios (1) Minimum	Maximum	Average
Sulphate	2	FH	100	100	100	8.20	13.00	10.60
COD	2	FL	100	50	0	1.30	2.30	1.80
Sulphide	2	FL	100	0	0	1.50	1.50	1.50
Strontium	12	FH	92	92	92	.10	15.00	8.47
Copper	12	FM	58	58	0	.40	4.80	2.35

TABLE C3.3 Detection Frequencies and Concentration Ratios for Found Parameters in Travelling Blanks

Parameter	Number of Observations	Frequency of Detection >RMDL (%)	Concentration Ratios (1) Minimum	Maximum	Average
Aluminum	4	75	.43	2.80	1.87
Copper	4	75	.20	2.80	1.55
Zinc	12	17	.40	11.00	1.39
Oil and grease	4	25	.96	1.00	.97
Total suspended solids	1	0	.84	.84	.84
DOC	4	0	.70	.80	.72
Total Kjeldahl Nitrogen	4	25	.32	1.10	.55
Chloride	12	0	.15	.80	.21
Cyanide Total	4	0	.00	.20	.20
Nitrate+Nitrite	4	0	.10	.10	.10
Strontium	4	0	.10	.10	.10

NOTE: (1) Concentration Ratio = Concentration Divided by Regulation Method Detection Limit

TABLE C3.4 Absolute Value of the Difference Between Effluent Monitoring and Duplicate Sample Concentration Divided by the Regulation Method Detection Limit for Found Parameters

Parameter	Number of Observations	Difference Ratios (1) Minimum	Maximum	Average
Chloride	3	5.00	10.00	6.67
Zinc	3	.00	7.00	2.37
Oil and grease	2	.24	2.60	1.42
Aluminum	2	1.33	1.33	1.33
Strontium	1	1.00	1.00	1.00
Cyanide Total	1	.60	.60	.60
Total Kjeldahl Nitrogen	1	.08	.08	.08
Nitrate+Nitrite	1	.04	.04	.04
Copper	1	.00	.00	.00
DOC	1	.00	.00	.00
Total suspended solids	3	.00	.00	.00

TABLE C3.5 Absolute Value of the Difference Between Effluent Monitoring and Split Sample Concentration Divided by the Regulation Method Detection Limit for Found Parameters

Parameter	Number of Observations	Difference Ratios (1) Minimum	Maximum	Average
Chloride	9	.00	5.00	1.33
DOC	3	.00	1.60	1.07
Aluminum	3	.00	1.67	.89
Zinc	9	.00	4.00	.61
Total Kjeldahl Nitrogen	3	.00	.60	.37
Total suspended solids	9	.00	.76	.15
Oil and grease	2	.00	.24	.12
Copper	3	.00	.20	.10
Cyanide Total	3	.00	.20	.00
Nitrate+Nitrite	3	.00	.00	.00
Strontium	3	.00	.00	.00

NOTE: (1) Difference Ratio = Absolute Value of the Difference in Concentration Divided by the Regulation Method Detection Limit

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TABLE C4.1 Detection Frequencies and Concentration Ratios For Found Parameters Monitored Monthly, Quarterly or Semi-Annually in Effluent

Parameter	Number of Observations	Class	Frequency of Detection (%) >RMDL	>2RMDL	>5RMDL	Concentration Ratios (1) Minimum	Maximum	Average
Aluminum	13	FH	100	100	100	9.33	140.00	47.21
Chloride	13	FH	100	100	100	8.00	65.00	26.92
Strontium	13	FH	100	100	100	7.00	22.50	14.58
Sulphate	13	FH	100	100	100	16.00	52.00	32.89
Zinc	13	FH	100	100	100	5.20	70.00	18.62
DOC	13	FH	100	100	92	4.20	22.00	13.32
Nitrate+Nitrite	13	FM	100	100	38	2.72	6.00	4.54
Oil and grease	13	FM	100	100	23	2.80	11.00	4.69
Total suspended solids	13	FH	100	92	85	1.80	40.00	13.68
Boron	13	FM	100	69	23	1.24	6.60	3.64
Total Kjeldahl Nitrogen	13	FM	100	69	23	1.40	13.40	4.18
TOC	12	FL	100	25	0	1.02	2.20	1.60
Phenolics (4AAP)	13	FM	92	85	31	.50	55.00	7.08
Sulphide	13	FH	85	69	54	.95	55.00	10.49
Ammonia plus Ammonium	13	FM	85	69	31	.68	16.80	5.05
Copper	13	FL	85	15	0	.50	4.60	1.63
Total phosphorus	13	IM	38	31	0	.69	4.50	1.42

NOTE: (1) Concentration Ratio = Concentration Divided by Regulation Method Detection Limit

QA/QC Data for Columbian (Page 1 of 1)
ST 0200 - East Outfall

TABLE C4.2 Detection Frequencies and Concentration Ratios For Found Parameters Monitored Monthly, Quarterly or Semi-Annually in Effluent

Parameter	Number of Observations	Class	Frequency of Detection (%) >RMDL	>2RMDL	>5RMDL	Concentration Ratios (1) Minimum	Maximum	Average
Aluminum	13	FH	100	100	100	5.67	40.00	23.82
Chloride	13	FH	100	100	100	12.00	105.00	46.38
DOC	13	FH	100	100	100	7.00	30.00	15.60
Strontium	13	FH	100	100	100	11.00	27.50	17.23
Sulphate	13	FH	100	100	100	19.20	86.00	53.32
Zinc	13	FH	100	100	100	6.60	550.00	54.68
Phenolics (4AAP)	13	FH	100	100	69	2.00	550.00	73.58
Total suspended solids	13	FH	100	100	69	4.00	17.60	6.89
Total Kjeldahl Nitrogen	13	FM	100	100	8	2.00	6.20	3.38
Boron	13	FM	100	92	8	1.92	5.60	3.46
Ammonia plus Ammonium	13	FM	100	85	31	1.28	9.60	4.26
Nitrate+Nitrite	13	FM	100	77	8	1.92	5.20	3.13
Oil and grease	13	FM	100	69	8	1.30	5.10	2.77
TOC	13	FL	92	23	8	.98	5.80	1.97
Sulphide	13	FM	85	77	38	.95	80.00	16.57
Copper	13	FL	62	31	0	.20	4.00	1.52
Total phosphorus	13	FL	46	8	8	.69	6.40	1.38

NOTE: (1) Concentration Ratio = Concentration Divided by Regulation Method Detection Limit

TABLE C5.1 Detection Frequencies and Concentration Ratios for Found Parameters Monitored Daily, Thrice-Weekly or Weekly in Effluent

Parameter	Number of Observations	Class	Frequency of Detection (%) >RMDL	>2RMDL	>5RMDL	Concentration Ratios (1) Minimum	Maximum	Average
Cyanide Total	62	FH	98	98	94	.40	146.00	19.00
Total suspended solids	144	FL	74	48	15	.84	38.00	2.93

TABLE C5.2 Detection Frequencies and Concentration Ratios For Found Parameters Monitored Monthly, Quarterly or Semi-Annually in Effluent

Parameter	Number of Observations	Class	Frequency of Detection (%) >RMDL	>2RMDL	>5RMDL	Concentration Ratios (1) Minimum	Maximum	Average
Aluminum	5	FH	100	100	100	6.33	14.67	9.27
Chloride	1	FH	100	100	100	15.00	15.00	15.00
Strontium	5	FH	100	100	100	7.50	9.50	8.60
Sulphate	1	FH	100	100	100	6.60	6.60	6.60
DOC	19	FH	100	100	74	2.40	30.00	8.29
Zinc	5	FL	100	20	0	1.10	4.20	2.04
Nitrate+Nitrite	20	FM	95	80	0	.40	4.80	2.76
Total Kjeldahl Nitrogen	5	FM	80	80	0	.46	2.40	1.97
Ammonia plus Ammonium	5	FL	80	40	20	.80	6.44	2.47
Oil and grease	20	IL	40	10	0	.96	2.80	1.28
Phenolics (4AAP)	5	IL	40	0	0	.50	1.00	.70
TOC	7	IL	29	0	0	.58	1.08	.79
COD	1	NO	0	0	0	1.00	1.00	1.00
Sulphide	1	NO	0	0	0	1.00	1.00	1.00

TABLE C5.3 Detection Frequencies and Concentration Ratios for Found Parameters in Travelling Blanks

Parameter	Number of Observations	Frequency of Detection >RMDL (%)	Concentration Ratios (1) Minimum	Maximum	Average
DOC	2	50	.80	1.40	1.10
Oil and grease	2	0	.96	.96	.96
Total Kjeldahl Nitrogen	2	50	.32	1.42	.87
Total suspended solids	1	0	.84	.84	.84
Phenolics (4AAP)	2	0	.50	1.00	.75
Cyanide Total	5	0	.20	.40	.40
Zinc	2	0	.40	.40	.40
Aluminum	2	0	.30	.30	.30
TOC	2	0	.22	.24	.23
Ammonia plus Ammonium	2	0	.10	.10	.10
Nitrate+Nitrite	2	0	.10	.10	.10
Strontium	2	0	.10	.10	.10

NOTE: (1) Concentration Ratio = Concentration Divided by Regulation Method Detection Limit

TABLE C5.4 Absolute Value of the Difference Between Effluent Monitoring and Duplicate Sample Concentration Divided by the Regulation Method Detection Limit for Found Parameters

Parameter	Number of Observations	Difference Ratios (1) Minimum	Maximum	Average
DOC	1	3.20	3.20	3.20
Total suspended solids	1	1.20	1.20	1.20
Aluminum	1	.67	.67	.67
Strontium	1	.50	.50	.50
Ammonia plus Ammonium	1	.24	.24	.24
Cyanide Total	2	.00	.40	.20
Nitrate+Nitrite	1	.20	.20	.20
Zinc	1	.10	.10	.10
Oil and grease	1	.00	.00	.00
Phenolics (4AAP)	1	.00	.00	.00
Total Kjeldahl Nitrogen	1	.00	.00	.00

TABLE C5.5 Absolute Value of the Difference Between Effluent Monitoring and Split Sample Concentration Divided by the Regulation Method Detection Limit for Found Parameters

Parameter	Number of Observations	Difference Ratios (1) Minimum	Maximum	Average
Aluminum	1	4.00	4.00	4.00
DOC	1	.60	.60	.60
Strontium	1	.50	.50	.50
Ammonia plus Ammonium	1	.44	.44	.44
Cyanide Total	3	.40	.60	.40
Zinc	1	.40	.40	.40
Total suspended solids	3	.00	.60	.25
TOC	1	.10	.10	.10
Nitrate+Nitrite	1	.00	.00	.00
Oil and grease	1	.00	.00	.00
Phenolics (4AAP)	1	.00	.00	.00
Total Kjeldahl Nitrogen	1	.00	.00	.00

NOTE: (1) Difference Ratio = Absolute Value of the Difference in Concentration Divided by the Regulation Method Detection Limit

TABLE C5.6 Detection Frequencies and Concentration Ratios for Found Parameters Monitored Daily, Thrice-Weekly or Weekly in Effluent

Parameter	Number of Observations	Class	Frequency of Detection (%) >RMDL	>2RMDL	>5RMDL	Concentration Ratios (1) Minimum	Maximum	Average
Cyanide Total	95	FM	100	86	33	1.00	22.00	5.00
Total suspended solids	217	FM	97	80	12	.64	440.00	7.73

TABLE C5.7 Detection Frequencies and Concentration Ratios For Found Parameters Monitored Monthly, Quarterly or Semi-Annually in Effluent

Parameter	Number of Observations	Class	Frequency of Detection (%) >RMDL	>2RMDL	>5RMDL	Concentration Ratios (1) Minimum	Maximum	Average
Chloride	1	FH	100	100	100	8.00	8.00	8.00
Strontium	7	FH	100	100	100	7.00	8.00	7.36
Aluminum	7	FH	100	100	71	3.67	12.33	6.71
Sulphate	1	FM	100	100	0	4.20	4.20	4.20
Sulphide	1	FM	100	100	0	2.00	2.00	2.00
Nitrate+Nitrite	30	FM	97	70	3	.10	5.20	2.63
DOC	30	FM	90	87	43	.64	10.00	4.72
Total Kjeldahl Nitrogen	7	FM	86	57	0	.80	4.40	2.25
Ammonia plus Ammonium	7	FL	57	43	0	.16	4.00	1.96
Phenolics (4AAP)	7	FL	43	14	0	.50	2.50	1.00
Zinc	7	IM	29	29	14	.20	9.30	2.21
TOC	25	IL	12	0	0	.10	1.50	.67
Oil and grease	30	IL	10	0	0	.96	1.90	1.01
COD	1	NO	0	0	0	.62	.62	.62

TABLE C5.8 Detection Frequencies and Concentration Ratios for Found Parameters in Travelling Blanks

Parameter	Number of Observations	Frequency of Detection >RMDL (%)	Concentration Ratios (1) Minimum	Maximum	Average
DOC	2	50	.64	1.80	1.22
Oil and grease	2	0	.96	.96	.96
Total suspended solids	1	0	.84	.84	.84
Phenolics (4AAP)	2	0	.50	1.00	.75
Total Kjeldahl Nitrogen	2	0	.46	.46	.46
Cyanide Total	7	0	.20	.40	.40
Zinc	2	0	.40	.40	.40
Aluminum	2	0	.30	.30	.30
Nitrate+Nitrite	2	0	.10	.44	.27
TOC	2	0	.13	.18	.16
Ammonia plus Ammonium	2	0	.10	.20	.15
Strontium	2	0	.10	.10	.10

NOTE: (1) Concentration Ratio = Concentration Divided by Regulation Method Detection Limit

TABLE C5.9 Absolute Value of the Difference Between Effluent Monitoring and Split Sample Concentration Divided by the Regulation Method Detection Limit for Found Parameters

Parameter	Number of Observations	Difference Ratios (1) Minimum	Maximum	Average
Aluminum	2	1.00	2.67	1.83
Total suspended solids	6	.12	3.80	.94
DOC	2	.60	1.00	.80
Total Kjeldahl Nitrogen	2	.00	1.00	.50
Cyanide Total	7	.00	.80	.20
Nitrate+Nitrite	2	.12	.20	.16
Ammonia plus Ammonium	2	.00	.28	.14
Zinc	2	.00	.10	.05
TOC	1	.02	.02	.02
Oil and grease	2	.00	.00	.00
Phenolics (4AAP)	2	.00	.00	.00
Strontium	2	.00	.00	.00

NOTE: (1) Difference Ratio = Absolute Value of the Difference in Concentration Divided by the Regulation Method Detection Limit

TABLE C6.1 Detection Frequencies and Concentration Ratios for Found Parameters Monitored Daily, Thrice-Weekly or Weekly in Effluent

Parameter	Number of Observations	Class	Frequency of Detection (%) >RMDL	>2RMDL	>5RMDL	Concentration Ratios (1) Minimum	Maximum	Average
Ammonia plus Ammonium	364	FH	100	100	100	6.40	81.20	32.65
DOC	52	FH	100	100	100	8.40	86.00	31.28
Nitrate+Nitrite	364	FH	100	100	100	6.40	160.00	28.83
Total Kjeldahl Nitrogen	364	FH	100	100	100	8.40	214.20	58.12
Total phosphorus	364	FH	100	100	87	2.00	138.00	8.46
Aluminum	156	FH	99	99	98	.70	183.33	26.26
Cyanide Total	52	FH	94	94	79	.40	132.40	19.40
Total suspended solids	364	FM	88	62	18	.20	77.00	3.64
Phenolics (4AAP)	52	FL	63	19	2	.15	10.50	1.29
Zinc	52	FL	52	23	2	.40	7.90	1.43
Oil and grease	52	FL	40	17	8	1.00	19.00	2.01
Molybdenum	43	IL	5	2	0	.15	2.15	.28

TABLE C6.2 Detection Frequencies and Concentration Ratios For Found Parameters Monitored Monthly, Quarterly or Semi-Annually in Effluent

Parameter	Number of Observations	Class	Frequency of Detection (%) >RMDL	>2RMDL	>5RMDL	Concentration Ratios (1) Minimum	Maximum	Average
Chloride	2	FH	100	100	100	13.50	20.50	17.00
Sulphate	2	FH	100	100	100	19.20	24.00	21.60
Strontium	12	FH	100	100	92	2.10	17.50	11.72
COD	2	FM	100	100	0	2.80	4.40	3.60
TOC	37	FM	100	73	11	1.06	10.20	3.10
Sulphide	2	FL	50	50	50	.95	6.00	3.48
Antimony	10	FL	50	20	0	.60	2.40	1.22
Mercury	10	IM	20	20	10	.19	12.00	1.76
Selenium	10	IL	10	0	0	.60	1.40	.68
Copper	11	IL	9	0	0	.20	1.50	.62
Toluene	12	IH	8	8	8	.80	5.40	1.18
PCBT	12	IM	8	8	0	.50	5.00	.87
Arsenic	11	NO	0	0	0	.60	.80	.62
Boron	11	NO	0	0	0	.52	.76	.64
Lead	10	NO	0	0	0	.33	.33	.33
Nickel	10	NO	0	0	0	.45	.45	.45

NOTE: (1) Concentration Ratio = Concentration Divided by Regulation Method Detection Limit

TABLE C6.3A Detection Frequencies and Concentration Ratios for Found Parameters in Travelling Blanks

Parameter	Number of Observations	Frequency of Detection >RMDL (%)	Concentration Ratios (1) Minimum	Maximum	Average
Zinc	3	33	.40	6.20	2.33
Oil and grease	3	0	1.00	1.00	1.00
Total suspended solids	3	0	1.00	1.00	1.00
Toluene	4	0	.80	.80	.80
DOC	3	0	.70	.80	.73
Nitrate+Nitrite	12	0	.72	.72	.72
Antimony	3	0	.60	.60	.60
Arsenic	3	0	.60	.60	.60
Selenium	3	0	.60	.60	.60
PCBT	3	0	.50	.50	.50
Nickel	3	0	.45	.45	.45
Total Kjeldahl Nitrogen	12	0	.44	.44	.44
Aluminum	9	11	.30	1.53	.44
Ammonia plus Ammonium	12	0	.40	.40	.40
Cyanide Total	4	0	.40	.40	.40
Lead	3	0	.33	.33	.33
Phenolics (4AAP)	4	0	.15	.50	.33
Total phosphorus	12	0	.30	.30	.30
TOC	3	0	.13	.42	.23
Copper	3	0	.20	.20	.20
Mercury	3	0	.19	.19	.19
Molybdenum	3	0	.15	.15	.15
Boron	3	0	.10	.10	.10
Strontium	3	0	.10	.10	.10

NOTE: (1) Concentration Ratio = Concentration Divided by Regulation Method Detection Limit

TABLE C6.3B Absolute Value of the Difference Between Uncorrected Travelling Blank Concentration and Corrected Travelling Blank Concentration Divided by the Regulation Method Detection Limit for Found Parameters

Parameter	Number of Observations	Difference Ratios (1) Minimum	Maximum	Average
Toluene	4	.00	7.00	4.20

TABLE C6.4A Range of Recoveries and Ratio of Spiked Quantity to the Regulation Method Detection Limit for Found Parameters (1)

ATG	Parameter	Number of Observations	Recovery (2) (%) Minimum	Maximum	Average	SPIKE/RMDL (3)
17	Toluene	3	75	95	87	40.0
27	PCBT	2	104	233	169	60.0

NOTE: (1) - Only those parameters for which travelling spikes were required are presented.

(2) - Recovery = Actual value divided by expected value X 100%

(3) - SPIKE/RMDL = Expected value of the spiked sample divided by Regulation Method Detection Limit

TABLE C6.4B Absolute Value of the Difference Between Uncorrected Travelling Spiked Blank Sample Concentration and Corrected Travelling Spiked Blank Sample Concentration Divided by the Regulation Method Detection Limit for Found Parameters

Parameter	Number of Observations	Difference Ratios (1) Minimum	Maximum	Average
Toluene	3	2.00	6.00	4.00

NOTE: (1) Difference Ratio = Absolute Value of the Difference in Concentration Divided by the Regulation Method Detection Limit

TABLE C6.5A Absolute Value of the Difference Between Effluent Monitoring and Split Sample Concentration Divided by the Regulation Method Detection Limit for Found Parameters

Parameter	Number of Observations	Difference Ratios (1) Minimum	Maximum	Average
Aluminum	12	.33	56.67	14.18
Cyanide Total	4	.00	48.40	12.80
Mercury	2	.00	3.91	1.95
DOC	3	.00	4.00	1.40
Nitrate+Nitrite	12	.00	4.00	1.33
PCBT	4	.00	4.50	1.13
Total Kjeldahl Nitrogen	12	.00	2.40	.75
Total suspended solids	12	.00	3.20	.65
Ammonia plus Ammonium	12	.00	1.20	.40
Selenium	2	.00	.80	.40
Copper	3	.20	.50	.37
Strontium	3	.00	1.00	.33
Zinc	3	.20	.30	.23
Total phosphorus	12	.00	2.00	.17
TOC	3	.08	.20	.16
Antimony	2	.00	.20	.10
Boron	3	.04	.04	.04
Arsenic	2	.00	.00	.00
Lead	2	.00	.00	.00
Molybdenum	2	.00	.00	.00
Nickel	2	.00	.00	.00
Oil and grease	1	.00	.00	.00
Phenolics (4AAP)	4	.00	.00	.00
Toluene	4	.00	.00	.00

TABLE C6.5B Absolute Value of the Difference Between Uncorrected Split Sample Concentration and Corrected Split Sample Concentration Divided by the Regulation Method Detection Limit for Found Parameters

Parameter	Number of Observations	Difference Ratios (1) Minimum	Maximum	Average
Toluene	3	4.20	5.00	4.60

TABLE C6.6 Absolute Value of the Difference Between Uncorrected Monitoring Sample Concentration and Corrected Monitoring Sample Concentration Divided by the Regulation Method Detection Limit for Found Parameters

Parameter	Number of Observations	Difference Ratios (1) Minimum	Maximum	Average
Toluene	11	.00	10.00	4.13

NOTE: (1) Difference Ratio = Absolute Value of the Difference in Concentration Divided by the Regulation Method Detection Limit

TABLE C7.1 Detection Frequencies and Concentration Ratios For Found Parameters Monitored Monthly, Quarterly or Semi-Annually in Effluent

Parameter	Number of Observations	Class	Frequency of Detection (%) >RMDL	>2RMDL	>5RMDL	Concentration Ratios (1) Minimum	Maximum	Average
Aluminum	12	FH	100	100	100	5.33	153.33	43.89
DOC	12	FH	100	100	100	9.20	22.00	13.52
Nitrate+Nitrite	12	FH	100	100	100	5.09	212.00	39.62
Strontium	12	FM	100	92	0	1.80	3.50	2.73
TOC	3	FL	100	0	0	1.00	1.68	1.35
Ammonia plus Ammonium	12	FH	92	92	92	.11	42.40	16.65
Total Kjeldahl Nitrogen	12	FH	92	92	92	.40	17.00	10.37
Zinc	12	FM	83	75	17	.40	11.00	3.68
Total suspended solids	12	FL	83	42	17	.84	6.60	2.36
Oil and grease	12	FL	67	17	0	.96	4.50	1.49
Total phosphorus	12	FL	58	17	8	.69	6.30	1.62

TABLE C7.2 Detection Frequencies and Concentration Ratios for Found Parameters in Travelling Blanks

Parameter	Number of Observations	Frequency of Detection >RMDL (%)	Concentration Ratios (1) Minimum	Maximum	Average
Oil and grease	2	0	.96	.96	.96
Zinc	2	50	.10	1.60	.85
Total suspended solids	1	0	.84	.84	.84
Total phosphorus	2	0	.69	.80	.75
DOC	2	0	.60	.70	.65
Total Kjeldahl Nitrogen	2	0	.32	.52	.42
Aluminum	2	0	.30	.30	.30
TOC	2	0	.10	.20	.15
Ammonia plus Ammonium	2	0	.10	.12	.11
Nitrate+Nitrite	2	0	.10	.10	.10
Strontium	2	0	.10	.10	.10

NOTE: (1) Concentration Ratio = Concentration Divided by Regulation Method Detection Limit

TABLE C7.3 Absolute Value of the Difference Between Effluent Monitoring and Duplicate Sample Concentration Divided by the Regulation Method Detection Limit for Found Parameters

Parameter	Number of Observations	Difference Ratios (1) Minimum	Maximum	Average
Nitrate+Nitrite	2	8.00	12.86	10.43
Ammonia plus Ammonium	2	2.86	4.60	3.73
Zinc	2	.10	4.80	2.45
Oil and grease	2	.00	1.54	.77
Total Kjeldahl Nitrogen	2	.20	.60	.40
Aluminum	2	.00	.67	.33
DOC	2	.00	.40	.20
Total suspended solids	2	.00	.40	.20
Total phosphorus	2	.10	.30	.20
Strontium	2	.00	.05	.03
TOC	1	.00	.00	.00

NOTE: (1) Difference Ratio = Absolute Value of the Difference in Concentration Divided by the Regulation Method Detection Limit

TABLE C8.1 Detection Frequencies and Concentration Ratios for Found Parameters Monitored Daily, Thrice-Weekly or Weekly in Effluent

Parameter	Number of Observations	Class	Frequency of Detection (%) >RMDL	>2RMDL	>5RMDL	Concentration Ratios (1) Minimum	Maximum	Average
DOC	52	FM	98	94	35	.70	54.00	6.60
Total suspended solids	363	FM	94	78	26	.50	14.90	3.80
Aluminum	52	FH	90	88	79	.10	24.00	9.47
Total phosphorus	52	IL	21	8	2	.69	23.00	1.37
TOC	51	IL	20	4	2	.20	5.60	.81

TABLE C8.2 Detection Frequencies and Concentration Ratios For Found Parameters Monitored Monthly, Quarterly or Semi-Annually in Effluent

Parameter	Number of Observations	Class	Frequency of Detection (%) >RMDL	>2RMDL	>5RMDL	Concentration Ratios (1) Minimum	Maximum	Average
Chloride	2	FH	100	100	100	8.50	9.50	9.00
Strontium	12	FH	100	100	100	7.00	9.00	7.78
Sulphate	2	FH	100	100	100	5.80	6.40	6.10
Sulphide	2	FM	100	100	0	2.50	3.00	2.75
Copper	13	FL	46	8	0	.10	3.20	.94

TABLE C8.3 Detection Frequencies and Concentration Ratios for Found Parameters in Travelling Blanks

Parameter	Number of Observations	Frequency of Detection >RMDL (%)	Concentration Ratios (1) Minimum	Maximum	Average
DOC	4	0	.70	.80	.72
Total phosphorus	4	0	.69	.69	.69
Aluminum	4	0	.30	.30	.30
Copper	4	0	.20	.20	.20
TOC	4	0	.10	.48	.20
Strontium	4	0	.10	.10	.10

NOTE: (1) Concentration Ratio = Concentration Divided by Regulation Method Detection Limit

TABLE C8.4 Absolute Value of the Difference Between Effluent Monitoring and Duplicate Sample Concentration Divided by the Regulation Method Detection Limit for Found Parameters

Parameter	Number of Observations	Difference Ratios (1) Minimum	Maximum	Average
Strontium	1	8.90	8.90	8.90
Total suspended solids	1	.70	.70	.70
Copper	1	.60	.60	.60

TABLE C8.5 Absolute Value of the Difference Between Effluent Monitoring and Split Sample Concentration Divided by the Regulation Method Detection Limit for Found Parameters

Parameter	Number of Observations	Difference Ratios (1) Minimum	Maximum	Average
Sulphide	1	2.90	2.90	2.90
Aluminum	4	1.67	2.00	1.92
DOC	4	.00	3.00	.95
Total suspended solids	15	.10	5.20	.82
Strontium	4	.50	1.00	.63
Copper	4	.10	1.00	.40
TOC	4	.02	.12	.10
Total phosphorus	4	.00	.30	.08
Chloride	1	.00	.00	.00
Sulphate	1	.00	.00	.00

TABLE C8.6 Absolute Value of the Difference Between Uncorrected Split Sample Concentration and Corrected Split Sample Concentration Divided by the Regulation Method Detection Limit for Found Parameters

Parameter	Number of Observations	Difference Ratios (1) Minimum	Maximum	Average
Aluminum	1	7.90	7.90	7.90
Strontium	1	7.90	7.90	7.90
Copper	1	.70	.70	.70

NOTE: (1) Difference Ratio = Absolute Value of the Difference in Concentration Divided by the Regulation Method Detection Limit

TABLE C9.1 Detection Frequencies and Concentration Ratios for Found Parameters Monitored Daily, Thrice-Weekly or Weekly in Effluent

Parameter	Number of Observations	Class	Frequency of Detection (%) >RMDL	>2RMDL	>5RMDL	Concentration Ratios (1) Minimum	Maximum	Average
Chloride	156	FH	100	100	100	******	31,750.00	23,969.39
DOC	52	FH	100	100	100	20.00	2,220.00	441.58
Sulphate	156	FH	100	100	100	83.60	272.00	232.72
TOC	52	FH	100	100	94	2.00	310.00	64.14
Total Kjeldahl Nitrogen	156	FH	100	99	99	1.60	21.40	11.73
Total suspended solids	365	FH	98	94	63	.60	68.20	8.27
Ammonia plus Ammonium	156	FH	98	98	96	.40	210.80	21.77
Nitrate+Nitrite	52	FM	88	79	27	.32	9.88	3.32
Phenolics (4AAP)	52	FL	85	8	0	.50	2.50	1.27
Total phosphorus	52	FL	73	19	10	1.00	29.30	2.37
Cyanide Total	51	FL	55	14	0	1.00	4.60	1.40
Mercury	52	FL	54	25	6	1.00	12.80	2.03
Sulphide	52	FL	42	23	8	.50	26.20	2.51
Oil and grease	52	IM	25	19	4	1.00	5.00	1.40

TABLE C9.2 Detection Frequencies and Concentration Ratios For Found Parameters Monitored Monthly, Quarterly or Semi-Annually in Effluent

Parameter	Number of Observations	Class	Frequency of Detection (%) >RMDL	>2RMDL	>5RMDL	Concentration Ratios (1) Minimum	Maximum	Average
Acrolein	2	FH	100	100	100	5.00	5.00	5.00
Boron	12	FH	100	100	100	6.76	22.80	10.18
COD	2	FH	100	100	100	10.00	40.00	25.00
Strontium	12	FH	100	100	100	192.00	332.00	245.33
Trichlorofluoromethane	12	FH	100	100	100	5.00	49.30	13.54
Acrylonitrile	2	FM	100	100	0	2.38	2.38	2.38
Styrene	2	FM	100	100	0	2.00	2.00	2.00
Toluene	2	FM	100	100	0	2.00	2.00	2.00
o-Xylene	2	FM	100	100	0	2.00	2.00	2.00
Octachlorodibenzo-p-dioxin	2	FL	100	50	0	1.30	3.17	2.23
Chloroform	12	FL	100	42	17	1.43	11.57	3.18
Benzene	2	FL	100	0	0	1.00	1.00	1.00
Ethylene dibromide	12	FH	83	83	83	1.00	5.00	4.33
Aluminum	12	FH	83	83	67	1.00	11.33	5.58
Bromoform	12	FM	83	83	0	.54	2.70	2.34
Bromomethane	12	FM	83	83	0	.54	2.70	2.34
Chloromethane	12	FM	83	83	0	.54	2.70	2.34
Dibromochloromethane	12	FM	83	83	0	.91	4.55	3.94
Tetrachloroethylene	12	FM	83	83	0	.45	2.27	1.97
Vinyl chloride	12	FM	83	83	0	.50	2.50	2.17
Molybdenum	12	FM	83	67	50	1.00	50.00	8.33
1,1,2-Trichloroethane	12	FL	83	25	0	.83	4.17	2.15
Methylene chloride	12	FL	83	25	0	.77	3.85	2.21
1,1,2,2-Tetrachloroethane	12	FL	83	0	0	.23	1.16	1.01
1,1-Dichloroethane	12	FL	83	0	0	.25	1.25	1.08
1,2-Dichloroethane	12	FL	83	0	0	.25	1.25	1.08
1,2-Dichloropropane	12	FL	83	0	0	.22	1.11	.96
Chlorobenzene	12	FL	83	0	0	.29	1.43	1.24
Cis-1,3-Dichloropropylene	12	FL	83	0	0	.36	1.79	1.55
Trans-1,3-Dichloropropylene	12	FL	83	0	0	.36	1.79	1.55
Arsenic	12	FM	75	67	33	.40	11.00	3.73

TABLE C9.2 (cont'd) Detection Frequencies and Concentration Ratios For Found Parameters Monitored Monthly, Quarterly or Semi-Annually in Effluent

Parameter	Number of Observations	Class	Frequency of Detection (%) >RMDL	>2RMDL	>5RMDL	Concentration Ratios (1) Minimum	Maximum	Average
Nickel	12	FL	58	50	8	.50	25.00	3.46
Lead	12	FL	50	33	33	1.00	50.00	7.72
Cadmium	12	FL	42	42	17	.10	50.00	5.64
Cobalt	12	FL	42	33	17	1.00	50.00	5.71
Zinc	12	IH	33	25	17	1.00	50.00	5.50
Thallium	12	IH	33	8	8	1.00	8.33	1.75
Chromium	12	IH	25	17	17	1.00	50.00	5.75
Copper	12	IH	17	17	17	1.00	50.00	6.67
Vanadium	12	IH	8	8	8	.67	5.00	1.03
Antimony	12	NO	0	0	0	.40	.40	.40
Beryllium	12	NO	0	0	0	1.00	1.00	1.00
Selenium	12	NO	0	0	0	.40	.60	.48
Total PCDF	2	NO	0	0	0	.87	.87	.87
Total TCDF	2	NO	0	0	0	.67	.67	.67

NOTE: (1) Concentration Ratio = Concentration Divided by Regulation Method Detection Limit

TABLE C9.3A Detection Frequencies and Concentration Ratios for Found Parameters in Travelling Blanks

Parameter	Number of Observations	Frequency of Detection >RMDL (%)	Concentration Ratios (1) Minimum	Maximum	Average
Aluminum	4	25	1.00	5.00	2.00
Cadmium	4	25	1.00	5.00	2.00
Cobalt	4	25	1.00	5.00	2.00
Ethylene dibromide	4	25	1.00	5.00	2.00
Molybdenum	4	25	1.00	5.00	2.00
Total phosphorus	4	25	1.00	5.00	2.00
Trichlorofluoromethane	4	25	1.00	5.00	2.00
Dibromochloromethane	4	25	.91	4.55	1.82
1,1,2-Trichloroethane	4	25	.33	4.17	1.29
Methylene chloride	4	25	.38	3.85	1.25
Zinc	4	25	1.00	2.00	1.25
Bromoform	4	25	.54	2.70	1.08
Bromomethane	4	25	.54	2.70	1.08
Chloromethane	4	25	.54	2.70	1.08
Beryllium	4	0	1.00	1.00	1.00
Boron	4	0	1.00	1.00	1.00
Chromium	4	0	1.00	1.00	1.00
Copper	4	0	1.00	1.00	1.00
Cyanide Total	4	0	1.00	1.00	1.00
DOC	4	25	1.00	1.00	1.00
Lead	4	0	1.00	1.00	1.00
Mercury	4	0	1.00	1.00	1.00
Nickel	4	25	.50	2.50	1.00
Oil and grease	4	0	1.00	1.00	1.00
Strontium	4	0	1.00	1.00	1.00
Thallium	4	0	1.00	1.00	1.00
Vinyl chloride	4	25	.50	2.50	1.00
Tetrachloroethylene	4	25	.45	2.27	.91
Cis-1,3-Dichloropropylene	4	25	.36	1.79	.71

TABLE C9.3A (cont'd) Detection Frequencies and Concentration Ratios for Found Parameters in Travelling Blanks

Parameter	Number of Observations	Frequency of Detection >RMDL (%)	Concentration Ratios (1) Minimum	Maximum	Average
Trans-1,3-Dichloropropylene	4	25	.36	1.79	.71
Vanadium	4	0	.67	.67	.67
Chlorobenzene	4	25	.29	1.43	.57
Chloroform	4	25	.29	1.43	.57
1,1-Dichloroethane	4	25	.25	1.25	.50
1,2-Dichloroethane	4	25	.25	1.25	.50
Phenolics (4AAP)	4	0	.50	.50	.50
Sulphide	4	0	.50	.50	.50
1,1,2,2-Tetrachloroethane	4	25	.23	1.16	.47
1,2-Dichloropropane	4	25	.22	1.11	.44
Ammonia plus Ammonium	12	0	.40	.40	.40
Antimony	4	0	.40	.40	.40
Arsenic	4	0	.40	.40	.40
Selenium	4	0	.40	.40	.40
Nitrate+Nitrite	4	0	.20	.20	.20
Total Kjeldahl Nitrogen	12	0	.20	.20	.20
Chloride	12	0	.10	.23	.11
TOC	4	0	.10	.12	.11
Sulphate	12	0	.10	.10	.10

NOTE: (1) Concentration Ratio = Concentration Divided by Regulation Method Detection Limit

TABLE C9.3B Absolute Value of the Difference Between Uncorrected Travelling Blank Concentration and Corrected Travelling Blank Concentration Divided by the Regulation Method Detection Limit for Found Parameters

Parameter	Number of Observations	Difference Ratios (1) Minimum	Maximum	Average
1,1,2,2-Tetrachloroethane	4	.00	.00	.00
1,1,2-Trichloroethane	4	.00	.00	.00
1,1-Dichloroethane	4	.00	.00	.00
1,2-Dichloroethane	4	.00	.00	.00
1,2-Dichloropropane	4	.00	.00	.00
Bromoform	4	.00	.00	.00
Bromomethane	4	.00	.00	.00
Chlorobenzene	4	.00	.00	.00
Chloroform	4	.00	.00	.00
Chloromethane	4	.00	.00	.00
Cis-1,3-Dichloropropylene	4	.00	.00	.00
Dibromochloromethane	4	.00	.00	.00
Ethylene dibromide	4	.00	.00	.00
Methylene chloride	4	.00	.00	.00
Tetrachloroethylene	4	.00	.00	.00
Trans-1,3-Dichloropropylene	4	.00	.00	.00
Trichlorofluoromethane	4	.00	.00	.00
Vinyl chloride	4	.00	.00	.00

NOTE: (1) Difference Ratio = Absolute Value of the Difference in Concentration Divided by the Regulation Method Detection Limit

TABLE C9.4A Range of Recoveries and Ratio of Spiked Quantity to the Regulation Method Detection Limit for Found Parameters (1)

ATG	Parameter	Number of Observations	Recovery (2) (%) Minimum	Maximum	Average	SPIKE/RMDL (3)
16	1,1,2,2-Tetrachloroethane	4	28	124	91	1.2
16	1,1,2-Trichloroethane	4	104	110	107	8.3
16	1,1-Dichloroethane	4	86	122	104	6.3
16	1,2-Dichloroethane	4	70	132	109	6.3
16	1,2-Dichloropropane	4	62	116	97	5.6
16	Bromoform	4	92	134	110	1.4
16	Bromomethane	4	59	122	87	2.7
16	Chlorobenzene	4	94	114	108	7.1
16	Chloroform	4	98	110	104	7.1
16	Chloromethane	4	61	102	78	2.7
16	Cis-1,3-Dichloropropylene	4	87	93	91	4.3
16	Dibromochloromethane	4	102	118	113	4.5
16	Ethylene dibromide	4	97	121	107	6.2
16	Methylene chloride	4	52	124	92	3.8
16	Tetrachloroethylene	4	92	104	98	4.5
16	Trans-1,3-Dichloropropylene	4	80	95	90	2.9
16	Trichlorofluoromethane	4	38	172	122	5.0
16	Vinyl chloride	4	73	101	82	2.5

NOTE: (1) - Only those parameters for which travelling spikes were required are presented.

(2) - Recovery = Actual value divided by expected value X 100%

(3) - SPIKE/RMDL = Expected value of the spiked sample divided by Regulation Method Detection Limit

TABLE C9.4B Absolute Value of the Difference Between Uncorrected Travelling Spiked Blank Sample Concentration and Corrected Travelling Spiked Blank Sample Concentration Divided by the Regulation Method Detection Limit for Found Parameters

Parameter	Number of Observations	Difference Ratios (1) Minimum	Maximum	Average
1,1,2,2-Tetrachloroethane	4	.00	.00	.00
1,1,2-Trichloroethane	4	.00	.00	.00
1,1-Dichloroethane	4	.00	.00	.00
1,2-Dichloroethane	4	.00	.00	.00
1,2-Dichloropropane	4	.00	.00	.00
Bromoform	4	.00	.00	.00
Bromomethane	4	.00	.00	.00
Chlorobenzene	4	.00	.00	.00
Chloroform	4	.00	.00	.00
Chloromethane	4	.00	.00	.00
Cis-1,3-Dichloropropylene	4	.00	.00	.00
Dibromochloromethane	4	.00	.00	.00
Ethylene dibromide	4	.00	.00	.00
Methylene chloride	4	.00	.00	.00
Tetrachloroethylene	4	.00	.00	.00
Trans-1,3-Dichloropropylene	4	.00	.00	.00
Trichlorofluoromethane	4	.00	.00	.00
Vinyl chloride	4	.00	.00	.00

NOTE: (1) Difference Ratio = Absolute Value of the Difference in Concentration Divided by the Regulation Method Detection Limit

TABLE C9.5A Absolute Value of the Difference Between Effluent Monitoring and Duplicate Sample Concentration Divided by the Regulation Method Detection Limit for Found Parameters

Parameter	Number of Observations	Difference Ratios (1) Minimum	Maximum	Average
Sulphide	4	.00	23.00	5.80
Trichlorofluoromethane	4	.00	2.10	.98
Oil and grease	4	.00	2.00	.75
Chloroform	4	.00	.57	.18
1,1,2,2-Tetrachloroethane	4	.00	.00	.00
1,1,2-Trichloroethane	4	.00	.00	.00
1,1-Dichloroethane	4	.00	.00	.00
1,2-Dichloroethane	4	.00	.00	.00
1,2-Dichloropropane	4	.00	.00	.00
Bromoform	4	.00	.00	.00
Bromomethane	4	.00	.00	.00
Chlorobenzene	4	.00	.00	.00
Chloromethane	4	.00	.00	.00
Cis-1,3-Dichloropropylene	4	.00	.00	.00
Dibromochloromethane	4	.00	.00	.00
Ethylene dibromide	4	.00	.00	.00
Methylene chloride	4	.00	.00	.00
Tetrachloroethylene	4	.00	.00	.00
Trans-1,3-Dichloropropylene	4	.00	.00	.00
Vinyl chloride	4	.00	.00	.00

TABLE C9.5B Absolute Value of the Difference Between Uncorrected Duplicate Concentration and Corrected Duplicate Concentration Divided by the Regulation Method Detection Limit for Found Parameters

Parameter	Number of Observations	Difference Ratios (1) Minimum	Maximum	Average
1,1,2,2-Tetrachloroethane	4	.00	.00	.00
1,1,2-Trichloroethane	4	.00	.00	.00
1,1-Dichloroethane	4	.00	.00	.00
1,2-Dichloroethane	4	.00	.00	.00
1,2-Dichloropropane	4	.00	.00	.00
Bromoform	4	.00	.00	.00
Bromomethane	4	.00	.00	.00
Chlorobenzene	4	.00	.00	.00
Chloroform	4	.00	.00	.00
Chloromethane	4	.00	.00	.00
Cis-1,3-Dichloropropylene	4	.00	.00	.00
Dibromochloromethane	4	.00	.00	.00
Ethylene dibromide	4	.00	.00	.00
Methylene chloride	4	.00	.00	.00
Tetrachloroethylene	4	.00	.00	.00
Trans-1,3-Dichloropropylene	4	.00	.00	.00
Trichlorofluoromethane	4	.00	.00	.00
Vinyl chloride	4	.00	.00	.00

NOTE: (1) Difference Ratio = Absolute Value of the Difference in Concentration Divided by the Regulation Method Detection Limit

TABLE C9.6 Absolute Value of the Difference Between Effluent Monitoring and Split Sample Concentration Divided by the Regulation Method Detection Limit for Found Parameters

Parameter	Number of Observations	Difference Ratios (1) Minimum	Maximum	Average
Chloride	12	150.00	2,300.00	1,142.92
DOC	4	16.00	238.00	137.50
TOC	4	.60	23.20	10.00
Sulphate	12	.00	18.00	5.63
Total suspended solids	12	.00	6.80	2.18
Strontium	4	1.50	2.50	2.00
Aluminum	4	.00	3.33	1.67
Arsenic	4	.60	1.80	1.35
Lead	4	.00	4.00	1.33
Ammonia plus Ammonium	12	.00	6.00	1.33
Total Kjeldahl Nitrogen	12	.00	3.40	1.30
Cadmium	4	.00	4.90	1.23
Boron	4	.00	1.40	.50
Zinc	4	.00	2.00	.50
Cyanide Total	4	.00	1.00	.40
Mercury	4	.20	.60	.40
Phenolics (4AAP)	4	.00	.95	.29
Copper	4	.00	1.00	.25
Thallium	4	.00	.33	.08
Selenium	4	.00	.20	.05
Nitrate+Nitrite	4	.00	.08	.02
Antimony	4	.00	.00	.00
Beryllium	4	.00	.00	.00
Chromium	4	.00	.00	.00
Cobalt	4	.00	.00	.00
Molybdenum	4	.00	.00	.00
Nickel	4	.00	.00	.00
Total phosphorus	4	.00	.00	.00
Vanadium	4	.00	.00	.00

NOTE: (1) Difference Ratio = Absolute Value of the Difference in Concentration Divided by the Regulation Method Detection Limit

TABLE C9.7 Absolute Value of the Difference Between Uncorrected Monitoring Sample Concentration and Corrected Monitoring Sample Concentration Divided by the Regulation Method Detection Limit for Found Parameters

Parameter	Number of Observations	Difference Ratios (1) Minimum	Maximum	Average
1,1,2,2-Tetrachloroethane	12	.00	.00	.00
1,1,2-Trichloroethane	12	.00	.00	.00
1,1-Dichloroethane	12	.00	.00	.00
1,2-Dichloroethane	12	.00	.00	.00
1,2-Dichloropropane	12	.00	.00	.00
Acrolein	2	.00	.00	.00
Acrylonitrile	2	.00	.00	.00
Benzene	2	.00	.00	.00
Bromoform	12	.00	.00	.00
Bromomethane	12	.00	.00	.00
Chlorobenzene	12	.00	.00	.00
Chloroform	12	.00	.00	.00
Chloromethane	12	.00	.00	.00
Cis-1,3-Dichloropropylene	12	.00	.00	.00
Dibromochloromethane	12	.00	.00	.00
Ethylene dibromide	12	.00	.00	.00
Methylene chloride	12	.00	.00	.00
Styrene	2	.00	.00	.00
Tetrachloroethylene	12	.00	.00	.00
Toluene	2	.00	.00	.00
Trans-1,3-Dichloropropylene	12	.00	.00	.00
Trichlorofluoromethane	12	.00	.00	.00
Vinyl chloride	12	.00	.00	.00
o-Xylene	2	.00	.00	.00

NOTE: (1) Difference Ratio = Absolute Value of the Difference in Concentration Divided by the Regulation Method Detection Limit

TABLE C10.1 Detection Frequencies and Concentration Ratios for Found Parameters Monitored Daily, Thrice-Weekly or Weekly in Effluent

Parameter	Number of Observations	Class	Frequency of Detection (%) >RMDL	>2RMDL	>5RMDL	Concentration Ratios (1) Minimum	Maximum	Average
Chloride	155	FH	100	100	100	52.20	2,612.00	524.49
Chloroform	52	FH	100	100	100	7.14	68.57	15.07
Sulphate	155	FH	100	100	100	5.60	167.20	59.36
Mercury	365	FH	100	100	99	2.00	6,920.00	168.42
DOC	51	FH	100	100	88	3.30	14.80	7.77
Copper	155	FL	98	42	2	.60	14.40	2.01
Aluminum	52	FM	90	81	46	.90	13.00	4.90
Total suspended solids	362	FM	80	66	45	.60	89.80	9.54
Total phosphorus	52	FL	79	50	4	.20	5.88	2.00
Cadmium	52	FM	77	77	15	.10	26.50	4.16
Zinc	155	FL	75	49	10	.80	58.50	2.92
Nitrate+Nitrite	52	FL	71	12	4	.10	344.00	7.90
Oil and grease	52	FL	69	29	4	.90	9.10	1.75
Phenolics (4AAP)	52	FL	65	37	4	.30	5.50	1.82
Chromium	52	IL	27	12	0	.10	2.75	1.04
Dibromochloromethane	52	IL	21	6	2	.36	6.82	.83

TABLE C10.2 Detection Frequencies and Concentration Ratios For Found Parameters Monitored Monthly, Quarterly or Semi-Annually in Effluent

Parameter	Number of Observations	Class	Frequency of Detection (%) >RMDL	>2RMDL	>5RMDL	Concentration Ratios (1) Minimum	Maximum	Average
Strontium	8	FH	100	100	100	27.50	230.00	162.19
COD	4	FL	100	50	25	1.30	20.00	6.48
Sulphide	11	FH	91	73	73	.50	28.00	10.75
Boron	10	FM	90	70	20	.34	16.60	4.55
Total TCDF	4	FH	75	75	75	.50	160.00	66.46
Volatile suspended solids	4	FM	75	75	0	.10	3.00	1.98
Octachlorodibenzofuran	4	FL	75	25	25	.73	11.33	3.78
Hexachlorocyclopentadiene	12	FL	75	17	0	.38	3.00	1.51
Hexachloroethane	12	FL	67	50	50	.30	1,750.00	167.18
Total PCDF	4	FL	50	50	50	.87	160.00	44.93
Total H6CDF	4	FL	50	50	25	.75	35.00	10.31
Hexachlorobenzene	12	FL	50	42	17	.36	103.00	11.12
Hexachlorobutadiene	12	FL	50	33	33	.23	157.00	16.73
Total TCDD	4	FL	50	0	0	.55	1.15	.85
1,2,4-Trichlorobenzene	12	FL	42	25	17	.18	70.30	7.90
Pentachlorobenzene	12	FL	42	25	8	.11	5.00	1.45
TOC	36	FL	42	3	0	.42	4.62	1.05
Total Kjeldahl Nitrogen	12	FL	42	0	0	.64	1.60	.94
1,2,3-Trichlorobenzene	12	IL	33	17	0	.20	4.40	1.06
PCBT	3	IL	33	0	0	.50	1.30	.77
Cyanide Total	4	IH	25	25	25	.40	60.00	15.40
Total PCDD	4	IM	25	25	0	.95	2.50	1.34
Octachlorostyrene	12	IM	25	17	8	.12	10.20	1.58
Lead	12	IH	25	8	8	.33	11.67	1.57
Methylene chloride	12	IM	17	17	8	.10	31.54	3.30
Molybdenum	12	IL	17	8	0	.25	2.95	.58
Vanadium	12	IL	17	8	0	.13	4.27	.73
1,2-Dichloroethane	12	IL	17	0	0	.63	1.03	.70
1,2,3,4-Tetrachlorobenzene	12	IL	8	0	0	.12	1.30	.80

TABLE C10.2 (cont'd) Detection Frequencies and Concentration Ratios For Found Parameters Monitored Monthly, Quarterly or Semi-Annually in Effluent

Parameter	Number of Observations	Class	Frequency of Detection (%) >RMDL	>2RMDL	>5RMDL	Concentration Ratios (1) Minimum	Maximum	Average
1,2,4,5-Tetrachlorobenzene	12	IL	8	0	0	.11	1.00	.39
2,4,5-Trichlorotoluene	12	IL	8	0	0	.14	1.20	.44
Nickel	12	IL	8	0	0	.17	1.35	.48
Thallium	12	IL	8	0	0	.37	1.83	.74
1,2,3,5-Tetrachlorobenzene	12	NO	0	0	0	.21	.49	.29
Arsenic	12	NO	0	0	0	.40	.60	.56
Beryllium	12	NO	0	0	0	.16	.50	.27
Cobalt	12	NO	0	0	0	.22	.45	.29
Total H6CDD	4	NO	0	0	0	.73	.73	.73
Total H7CDF	4	NO	0	0	0	.67	.67	.67

NOTE: (1) Concentration Ratio = Concentration Divided by Regulation Method Detection Limit

TABLE C10.3A Detection Frequencies and Concentration Ratios for Found Parameters in Travelling Blanks

Parameter	Number of Observations	Frequency of Detection >RMDL (%)	Concentration Ratios (1) Minimum	Maximum	Average
Cadmium	3	100	2.60	4.50	3.87
Copper	9	89	.75	1.20	1.15
Phenolics (4AAP)	1	0	1.00	1.00	1.00
Zinc	9	11	.65	1.20	.98
Oil and grease	1	0	.90	.90	.90
Aluminum	3	0	.61	.90	.80
Mercury	2	0	.80	.80	.80
Chromium	3	0	.50	.90	.77
Nitrate+Nitrite	1	0	.64	.64	.64
1,2-Dichloroethane	3	0	.63	.63	.63
Methylene chloride	3	0	.62	.62	.62
Arsenic	1	0	.60	.60	.60
Chloroform	3	0	.57	.57	.57
Strontium	1	0	.50	.50	.50
Sulphide	2	0	.50	.50	.50
Lead	1	0	.37	.37	.37
Thallium	1	0	.37	.37	.37
Dibromochloromethane	3	0	.36	.36	.36
Sulphate	8	0	.10	.80	.36
DOC	3	0	.34	.40	.36
Molybdenum	1	0	.25	.25	.25
Chloride	8	0	.10	.50	.22
Cobalt	1	0	.22	.22	.22
Total phosphorus	2	0	.20	.20	.20
Nickel	1	0	.17	.17	.17
Beryllium	1	0	.16	.16	.16
Vanadium	1	0	.13	.13	.13
Boron	1	0	.10	.10	.10

NOTE: (1) Concentration Ratio = Concentration Divided by Regulation Method Detection Limit

ABLE C10.3B Absolute Value of the Difference Between Uncorrected Travelling Blank Concentration and Corrected Travelling Blank Concentration Divided by the Regulation Method Detection Limit for Found Parameters

Parameter	Number of Observations	Difference Ratios (1) Minimum	Maximum	Average
1,2-Dichloroethane	3	.00	.00	.00
Chloroform	3	.00	.00	.00
Dibromochloromethane	3	.00	.00	.00
Methylene chloride	3	.00	.00	.00

NOTE: (1) Difference Ratio = Absolute Value of the Difference in Concentration Divided by the Regulation Method Detection Limit

TABLE C10.4A Range of Recoveries and Ratio of Spiked Quantity to the Regulation Method Detection Limit for Found Parameters (1)

ATG	Parameter	Number of Observations	Recovery (2) (%) Minimum	Maximum	Average	SPIKE/RMDL (3)
16	1,2-Dichloroethane	3	96	105	101	29.1
16	Chloroform	3	68	105	93	32.0
16	Dibromochloromethane	3	89	100	93	21.5
16	Methylene chloride	3	88	103	97	17.8

NOTE: (1) - Only those parameters for which travelling spikes were required are presented.

(2) - Recovery = Actual value divided by expected value X 100%

(3) - SPIKE/RMDL = Expected value of the spiked sample divided by Regulation Method Detection Limit

ABLE C10.4B Absolute Value of the Difference Between Uncorrected Travelling Spiked Blank Sample Concentration and Corrected Travelling Spiked Blank Sample Concentration Divided by the Regulation Method Detection Limit for Found Parameters

Parameter	Number of Observations	Difference Ratios (1) Minimum	Maximum	Average
1,2-Dichloroethane	3	.00	.00	.00
Chloroform	3	.00	.00	.00
Dibromochloromethane	3	.00	.00	.00
Methylene chloride	3	.00	.00	.00

NOTE: (1) Difference Ratio = Absolute Value of the Difference in Concentration Divided by the Regulation Method Detection Limit

TABLE C10.5A Range of Recoveries and Ratio of Spiked Quantity to the Regulation Method Detection Limit for Spiked Samples for Found Parameters (1)

ATG	Parameter	Number of Observations	Recovery (2) (%) Minimum	Maximum	Average	SPIKE/RMDL (3)
5	DOC	1	170	170	170	10.0
6	Total phosphorus	2	153	245	199	2.5
9	Aluminum	3	117	289	183	6.7
9	Cadmium	3	98	115	109	40.0
9	Chromium	3	96	108	103	10.0
9	Copper	3	109	122	113	20.0
9	Zinc	3	111	112	111	20.0
10	Arsenic	1	120	120	120	2.0
12	Mercury	2	188	265	227	100.0
16	1,2-Dichloroethane	1	100	100	100	29.3
16	Chloroform	1	140	140	140	31.3
16	Dibromochloromethane	1	105	105	105	22.0
16	Methylene chloride	1	94	94	94	17.7
I1	Chloride	5	23	335	216	2400.0
I3	Sulphate	4	390	500	443	16.0

NOTE: (1) - Only those parameters for which spiked samples were required are presented.

(2) - Recovery = Actual value divided by expected value X 100%

(3) - SPIKE/RMDL = Expected value of the spiked sample divided by Regulation Method Detection Limit

TABLE C10.5B Absolute Value of the Difference Between Uncorrected Spiked Sample Concentration and Corrected Spiked Sample Concentration Divided by the Regulation Method Detection Limit for Found Parameters

Parameter	Number of Observations	Difference Ratios (1) Minimum	Maximum	Average
1,2-Dichloroethane	1	.00	.00	.00
Chloroform	1	.00	.00	.00
Dibromochloromethane	1	.00	.00	.00
Methylene chloride	1	.00	.00	.00

NOTE: (1) Difference Ratio = Absolute Value of the Difference in Concentration Divided by the Regulation Method Detection Limit

TABLE C10.6A Absolute Value of the Difference Between Effluent Monitoring and Duplicate Sample Concentration Divided by the Regulation Method Detection Limit for Found Parameters

Parameter	Number of Observations	Difference Ratios (1) Minimum	Maximum	Average
Aluminum	1	34.67	34.67	34.67
Boron	1	26.80	26.80	26.80
Zinc	1	18.00	18.00	18.00
Strontium	1	10.00	10.00	10.00
Chloroform	3	5.14	8.14	6.48
Copper	1	5.10	5.10	5.10
Nickel	1	3.65	3.65	3.65
Dibromochloromethane	3	.78	6.09	3.38
Lead	1	2.00	2.00	2.00
Molybdenum	1	1.75	1.75	1.75
Chromium	1	1.45	1.45	1.45
Methylene chloride	3	.09	1.62	.60
Vanadium	1	.47	.47	.47
1,2-Dichloroethane	3	.01	.40	.14
Beryllium	1	.00	.00	.00
Cadmium	1	.00	.00	.00
Cobalt	1	.00	.00	.00
Sulphide	1	.00	.00	.00
Thallium	1	.00	.00	.00

TABLE C10.6B Absolute Value of the Difference Between Uncorrected Duplicate Concentration and Corrected Duplicate Concentration Divided by the Regulation Method Detection Limit for Found Parameters

Parameter	Number of Observations	Difference Ratios (1) Minimum	Maximum	Average
1,2-Dichloroethane	3	.00	.00	.00
Chloroform	3	.00	.00	.00
Dibromochloromethane	3	.00	.00	.00
Methylene chloride	3	.00	.00	.00

NOTE: (1) Difference Ratio = Absolute Value of the Difference in Concentration Divided by the Regulation Method Detection Limit

TABLE C10.7 Absolute Value of the Difference Between Effluent Monitoring and Split Sample Concentration Divided by the Regulation Method Detection Limit for Found Parameters

Parameter	Number of Observations	Difference Ratios (1) Minimum	Maximum	Average
Chloride	13	.00	125.00	17.22
Mercury	9	.00	38.00	10.33
Sulphide	2	6.13	13.50	9.81
Cadmium	8	.00	5.30	3.98
Total suspended solids	10	.00	18.00	3.70
Copper	12	.00	29.80	3.13
Aluminum	8	.00	6.67	3.05
Sulphate	12	.00	10.00	2.38
Lead	1	1.67	1.67	1.67
Molybdenum	1	1.35	1.35	1.35
DOC	4	.40	2.80	1.25
Zinc	12	.10	3.50	1.19
Beryllium	1	1.04	1.04	1.04
Nickel	1	.90	.90	.90
Chromium	8	.25	.80	.60
Cobalt	1	.59	.59	.59
TOC	3	.20	.42	.31
Total phosphorus	4	.00	.59	.30
Thallium	1	.20	.20	.20
Arsenic	2	.00	.11	.05

TABLE C10.8 Absolute Value of the Difference Between Uncorrected Monitoring Sample Concentration and Corrected Monitoring Sample Concentration Divided by the Regulation Method Detection Limit for Found Parameters

Parameter	Number of Observations	Difference Ratios (1) Minimum	Maximum	Average
Methylene chloride	12	.00	29.69	2.73
Chloroform	52	.00	4.29	.23
1,2-Dichloroethane	12	.00	.40	.11
Dibromochloromethane	52	.00	2.95	.11

NOTE: (1) Difference Ratio = Absolute Value of the Difference in Concentration Divided by the Regulation Method Detection Limit

TABLE C10.9 Detection Frequencies and Concentration Ratios for Found Parameters Monitored Daily, Thrice-Weekly or Weekly in Effluent

Parameter	Number of Observations	Class	Frequency of Detection (%) >RMDL	>2RMDL	>5RMDL	Concentration Ratios (1) Minimum	Maximum	Average
Mercury	356	FH	100	100	100	75.00	55,000.00	1,387.36
Total suspended solids	354	FH	99	97	90	.80	1,880.00	120.56
Zinc	154	FH	99	98	73	1.00	78.30	9.70
Aluminum	154	FH	99	98	83	.87	246.17	16.84
Oil and grease	52	FH	83	67	54	.90	47.60	9.15
Nitrate+Nitrite	155	FL	80	34	1	.10	15.20	1.78
Phenolics (4AAP)	52	FL	65	44	12	.10	8.85	2.27

TABLE C10.10 Detection Frequencies and Concentration Ratios For Found Parameters Monitored Monthly, Quarterly or Semi-Annually in Effluent

Parameter	Number of Observations	Class	Frequency of Detection (%) >RMDL	>2RMDL	>5RMDL	Concentration Ratios (1) Minimum	Maximum	Average
Boron	10	FH	100	100	100	5.60	35.20	14.70
COD	4	FH	100	100	100	7.70	120.00	59.30
Chloride	4	FH	100	100	100	2,450.00	14,500.00	8,425.00
DOC	11	FH	100	100	100	6.50	70.00	23.40
Strontium	8	FH	100	100	100	43.00	490.00	192.88
Sulphate	4	FH	100	100	100	154.00	320.00	261.00
Chloroform	4	FH	100	100	75	2.23	58.57	27.59
Hexachloroethane	12	FH	100	92	92	1.40	296.00	94.86
Total phosphorus	12	FH	100	92	58	1.60	30.00	7.15
Volatile suspended solids	4	FH	100	75	75	1.10	50.00	24.28
TOC	10	FM	100	70	10	1.68	6.00	2.85
Hexachlorobutadiene	12	FH	83	83	67	.23	60.20	24.91
Hexachlorobenzene	12	FH	83	75	67	.36	32.10	13.58
Pentachlorobenzene	12	FH	83	67	58	.40	24.50	8.08
Hexachlorocyclopentadiene	12	FL	83	50	17	.80	17.00	3.91
Copper	12	FL	83	42	25	.30	7.50	2.64
Arsenic	12	FL	83	17	0	.60	4.40	1.50
Octachlorodibenzofuran	12	FH	75	75	75	.73	123.33	25.35
Total H6CDF	12	FH	75	75	75	.75	260.00	60.52
Total PCDF	12	FH	75	75	75	.87	800.00	193.05
Total TCDF	12	FH	75	75	75	.50	2,000.00	508.18
Total H7CDF	12	FH	75	75	67	.67	156.67	38.00
Methylene chloride	4	FM	75	75	25	.71	6.85	3.50
1,2,4-Trichlorobenzene	12	FM	75	67	50	.18	142.00	29.42
Cyanide Total	4	FL	75	50	25	.40	310.00	78.40
Dibromochloromethane	4	FL	75	50	0	.22	4.64	2.45
Vanadium	12	FL	75	33	8	.37	8.67	2.26
1,2-Dichloroethane	4	FL	75	25	0	.64	2.29	1.24
PCBT	3	FM	67	67	33	.68	6.00	3.06
Octachlorostyrene	12	FM	67	58	42	.12	22.70	5.62
Lead	12	FL	67	50	25	.17	33.67	5.01
1,2,3,4-Tetrachlorobenzene	12	FL	67	42	0	.12	3.50	1.83
2,4,5-Trichlorotoluene	12	FL	58	50	25	.14	11.20	3.36
1,2,3-Trichlorobenzene	12	FL	58	50	8	.32	9.75	2.36
Chromium	12	FL	58	42	0	.10	2.50	1.29
Nickel	12	FL	58	17	0	.17	3.65	1.30
1,2,4,5-Tetrachlorobenzene	12	FL	50	42	0	.11	3.30	1.31
Total Kjeldahl Nitrogen	12	FL	50	8	0	.28	2.80	1.04

TABLE C10.10 (cont'd) Detection Frequencies and Concentration Ratios For Found Parameters Monitored Monthly, Quarterly or Semi-Annually in Effluent

Parameter	Number of Observations	Class	Frequency of Detection (%) >RMDL	>2RMDL	>5RMDL	Concentration Ratios (1) Minimum	Maximum	Average
Total PCDD	12	FL	42	42	33	.95	170.00	23.80
Total TCDD	12	FL	42	33	17	.55	26.00	3.73
Molybdenum	12	FL	42	17	0	.25	4.65	1.11
Thallium	12	FL	42	0	0	.83	1.83	1.29
Total H6CDD	12	IM	33	33	17	.73	6.33	1.99
Beryllium	12	IM	33	25	0	.16	2.50	.83
Cobalt	12	IM	33	25	0	.20	2.25	.80
1,2,3,5-Tetrachlorobenzene	12	IL	33	17	0	.21	2.37	.86
Cadmium	12	IL	8	0	0	.15	1.00	.59
Sulphide	4	NO	0	0	0	.50	.75	.56

NOTE: (1) Concentration Ratio = Concentration Divided by Regulation Method Detection Limit

TABLE C10.11 Detection Frequencies and Concentration Ratios for Found Parameters in Travelling Blanks

Parameter	Number of Observations	Frequency of Detection >RMDL (%)	Concentration Ratios (1) Minimum	Maximum	Average
Cadmium	3	100	2.30	2.60	2.50
Mercury	9	22	.80	6.00	1.84
Hexachlorocyclopentadiene	4	100	1.70	1.70	1.70
Total H6CDF	4	25	.75	3.10	1.34
Aluminum	12	8	.61	5.50	1.22
Total TCDF	4	25	.50	3.07	1.14
Octachlorodibenzofuran	4	25	.73	1.97	1.04
1,2,3,4-Tetrachlorobenzene	4	0	1.00	1.00	1.00
Phenolics (4AAP)	4	0	1.00	1.00	1.00
Strontium	1	0	1.00	1.00	1.00
Zinc	12	8	.65	1.40	.99
1,2,3-Trichlorobenzene	4	50	.20	2.10	.98
Total PCDD	4	0	.95	.95	.95
Molybdenum	3	0	.93	.93	.93
Thallium	3	0	.73	1.00	.91
Oil and grease	4	0	.90	.90	.90
Total PCDF	4	0	.87	.87	.87
Total H7CDF	4	25	.67	1.37	.84
Copper	3	0	.75	.90	.80
Total Kjeldahl Nitrogen	4	0	.78	.78	.78
Beryllium	3	0	.68	.85	.74
Total H6CDD	4	0	.73	.73	.73
Arsenic	4	0	.60	.60	.60
Chromium	3	0	.50	.68	.56
Total TCDD	4	0	.55	.55	.55
Hexachlorobutadiene	4	0	.50	.50	.50
Octachlorostyrene	4	0	.50	.50	.50
Nitrate+Nitrite	10	0	.10	.64	.46
Lead	3	0	.37	.50	.46
Nickel	3	0	.38	.53	.43
Cobalt	3	0	.38	.50	.42
Pentachlorobenzene	4	0	.40	.40	.40
DOC	1	0	.34	.34	.34

TABLE C10.11 (cont'd) Detection Frequencies and Concentration Ratios for Found Parameters in Travelling Blanks

Parameter	Number of Observations	Frequency of Detection >RMDL (%)	Concentration Ratios (1) Minimum	Maximum	Average
1,2,3,5-Tetrachlorobenzene	4	0	.30	.30	.30
1,2,4,5-Tetrachlorobenzene	4	0	.30	.30	.30
1,2,4-Trichlorobenzene	4	0	.30	.30	.30
2,4,5-Trichlorotoluene	4	0	.30	.30	.30
Hexachlorobenzene	4	0	.30	.30	.30
Hexachloroethane	4	0	.30	.30	.30
Total phosphorus	2	0	.20	.20	.20
Vanadium	3	0	.13	.17	.14
Boron	2	0	.10	.10	.10

NOTE: (1) Concentration Ratio = Concentration Divided by Regulation Method Detection Limit

TABLE C10.12 Range of Recoveries and Ratio of Spiked Quantity to the Regulation Method Detection Limit for Found Parameters (1)

ATG	Parameter	Number of Observations	Recovery (2) (%) Minimum	Maximum	Average	SPIKE/RMDL (3)
23	1,2,3,4-Tetrachlorobenzene	4	83	144	108	7.0
23	1,2,3,5-Tetrachlorobenzene	4	78	135	104	7.0
23	1,2,3-Trichlorobenzene	4	79	162	117	11.5
23	1,2,4,5-Tetrachlorobenzene	4	78	133	104	7.0
23	1,2,4-Trichlorobenzene	4	78	144	106	11.5
23	2,4,5-Trichlorotoluene	4	66	122	100	11.5
23	Hexachlorobenzene	4	40	148	98	8.0
23	Hexachlorobutadiene	4	15	90	64	8.0
23	Hexachlorocyclopentadiene	4	19	43	26	8.0
23	Hexachloroethane	4	21	112	80	8.0
23	Octachlorostyrene	4	33	139	91	8.0
23	Pentachlorobenzene	4	40	146	98	8.0
24	Octachlorodibenzofuran	2	10	79	45	465.0
24	Total H6CDD	2	80	101	91	129.2
24	Total H6CDF	2	76	98	87	262.5
24	Total H7CDF	2	75	80	78	88.3
24	Total PCDD	2	68	80	74	66.3
24	Total PCDF	2	67	88	78	173.3
24	Total TCDD	2	57	88	73	63.8
24	Total TCDF	2	86	112	99	88.3

NOTE: (1) - Only those parameters for which travelling spikes were required are presented.

(2) - Recovery = Actual value divided by expected value X 100%

(3) - SPIKE/RMDL = Expected value of the spiked sample divided by Regulation Method Detection Limit

TABLE C10.13 Range of Recoveries and Ratio of Spiked Quantity to the Regulation Method Detection Limit for Spiked Samples for Found Parameters (1)

ATG	Parameter	Number of Observations	Recovery (2) (%) Minimum	Maximum	Average	SPIKE/RMDL (3)
4	Nitrate+Nitrite	3	182	1,180	544	2.4
4	Total Kjeldahl Nitrogen	1	156	156	156	10.0
6	Total phosphorus	1	560	560	560	2.0
9	Aluminum	4	203	568	375	6.7
9	Beryllium	1	102	102	102	20.0
9	Cadmium	1	161	161	161	40.0
9	Chromium	1	112	112	112	10.0
9	Cobalt	1	154	154	154	10.0
9	Copper	1	136	136	136	20.0
9	Lead	1	147	147	147	6.7
9	Molybdenum	1	113	113	113	10.0
9	Nickel	1	127	127	127	10.0
9	Thallium	1	122	122	122	6.7
9	Zinc	4	111	144	132	20.0
10	Arsenic	2	130	191	161	2.0
12	Mercury	3	274	430	349	566.7
14	Phenolics (4AAP)	2	78	105	92	20.0
23	1,2,3,4-Tetrachlorobenzene	1	111	111	111	10.0
23	1,2,3,5-Tetrachlorobenzene	1	89	89	89	10.0
23	1,2,3-Trichlorobenzene	1	180	180	180	10.0
23	1,2,4,5-Tetrachlorobenzene	1	85	85	85	10.0
23	1,2,4-Trichlorobenzene	1	100	100	100	10.0
23	2,4,5-Trichlorotoluene	1	88	88	88	10.0
23	Hexachlorobenzene	1	129	129	129	10.0
23	Hexachlorobutadiene	1	98	98	98	10.0
23	Hexachlorocyclopentadiene	1	29	29	29	10.0
23	Hexachloroethane	1	235	235	235	10.0
23	Octachlorostyrene	1	107	107	107	10.0
23	Pentachlorobenzene	1	100	100	100	10.0

NOTE: (1) - Only those parameters for which spiked samples were required are presented.

(2) - Recovery = Actual value divided by expected value X 100%

(3) - SPIKE/RMDL = Expected value of the spiked sample divided by Regulation Method Detection Limit

TABLE C10.14 Absolute Value of the Difference Between Effluent Monitoring and Duplicate Sample Concentration Divided by the Regulation Method Detection Limit for Found Parameters

Parameter	Number of Observations	Difference Ratios (1) Minimum	Maximum	Average
Total TCDF	3	.00	533.33	213.33
Total PCDF	3	1.00	333.33	115.89
Oil and grease	2	4.20	55.00	29.60
Total H6CDF	3	2.50	60.00	24.50
Strontium	2	5.00	40.00	22.50
Total H7CDF	3	7.33	30.00	16.11
Total PCDD	3	.00	35.00	11.67
Zinc	3	.00	29.00	9.73
Octachlorodibenzofuran	3	.00	16.67	7.00
Lead	3	.07	18.67	6.30
Aluminum	3	.33	4.33	2.67
Total TCDD	3	.00	7.50	2.50
Copper	3	.00	4.10	1.37
Vanadium	3	.00	3.43	1.37
Nickel	3	.00	2.00	.68
Boron	2	.40	.80	.60
Chromium	3	.00	.45	.17
Nitrate+Nitrite	5	.00	.36	.12
Cadmium	3	.00	.30	.10
Molybdenum	3	.00	.10	.03
Cobalt	3	.00	.02	.01
Beryllium	3	.00	.00	.00
Thallium	3	.00	.00	.00
Total H6CDD	3	.00	.00	.00

TABLE C10.15 Absolute Value of the Difference Between Uncorrected Monitoring Sample Concentration and Corrected Monitoring Sample Concentration Divided by the Regulation Method Detection Limit for Found Parameters

Parameter	Number of Observations	Difference Ratios (1) Minimum	Maximum	Average
Chloroform	3	.00	4.03	1.34
Methylene chloride	3	.00	1.31	.69
1,2-Dichloroethane	3	.00	.83	.28
Dibromochloromethane	3	.00	.16	.05

NOTE: (1) Difference Ratio = Absolute Value of the Difference in Concentration Divided by the Regulation Method Detection Limit

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PR 0300 - Ditch after Emergency

TABLE C11.1 Detection Frequencies and Concentration Ratios for Found Parameters Monitored Daily, Thrice-Weekly or Weekly in Effluent

Parameter	Number of Observations	Class	Frequency of Detection (%) >RMDL	>2RMDL	>5RMDL	Concentration Ratios (1) Minimum	Maximum	Average
Ammonia plus Ammonium	361	FH	100	100	100	11.16	688.00	104.44
Nitrate+Nitrite	361	FH	100	100	100	14.56	926.00	96.68
Total Kjeldahl Nitrogen	361	FH	100	100	100	12.18	421.76	66.01
DOC	48	FH	100	100	77	2.20	384.00	21.72
Aluminum	52	FH	100	98	79	1.53	48.33	13.77
Sulphate	157	FH	99	99	62	.40	18.39	7.04
Total suspended solids	361	FM	98	88	42	.92	63.60	7.40
Zinc	51	FM	94	76	45	.20	1,540.00	41.31
Total phosphorus	52	FM	81	54	21	.10	20.80	3.60
TOC	52	FL	44	12	4	.50	39.40	2.26

TABLE C11.2 Detection Frequencies and Concentration Ratios For Found Parameters Monitored Monthly, Quarterly or Semi-Annually in Effluent

Parameter	Number of Observations	Class	Frequency of Detection (%) >RMDL	>2RMDL	>5RMDL	Concentration Ratios (1) Minimum	Maximum	Average
Strontium	12	FH	100	100	100	5.00	11.50	6.67
Chloride	4	FH	100	100	75	4.50	31.90	12.85
Phenolics (4AAP)	12	FM	75	58	25	.40	7.70	3.27
Cyanide Total	4	FL	75	50	0	1.00	4.00	2.20
COD	4	FL	50	50	0	.70	2.90	1.68
Copper	12	FL	42	17	0	.10	2.75	.94
Phenol	4	IM	25	25	0	.10	2.63	.79
Chloromethane	4	IL	25	0	0	.10	1.08	.35
Boron	12	NO	0	0	0	.10	.60	.34
Chloroform	4	NO	0	0	0	.11	.11	.11

TABLE C11.3 Detection Frequencies and Concentration Ratios for Found Parameters in Travelling Blanks

Parameter	Number of Observations	Frequency of Detection >RMDL (%)	Concentration Ratios (1) Minimum	Maximum	Average
Phenolics (4AAP)	5	20	.40	9.20	2.16
Total Kjeldahl Nitrogen	11	18	.38	1.90	1.08
DOC	7	0	.60	1.00	.94
Total suspended solids	2	0	.92	.92	.92
TOC	7	0	.34	.94	.85
Ammonia plus Ammonium	11	9	.10	3.84	.73
Zinc	5	20	.10	2.00	.52
Total phosphorus	9	0	.31	.68	.50
Nitrate+Nitrite	11	0	.10	.66	.46
Chloride	2	0	.10	.75	.43
Strontium	5	0	.25	.30	.26
Copper	5	0	.10	.60	.25
Aluminum	5	0	.10	.67	.24
Boron	5	0	.10	.40	.18
Sulphate	11	0	.10	.20	.12

NOTE: (1) Concentration Ratio = Concentration Divided by Regulation Method Detection Limit

TABLE C11.4 Range of Recoveries and Ratio of Spiked Quantity to the Regulation Method Detection Limit for Found Parameters (1)

ATG	Parameter	Number of Observations	Recovery (2) (%) Minimum	Maximum	Average	SPIKE/RMDL (3)
4	Ammonia plus Ammonium	1	95	95	95	11.7
4	Nitrate+Nitrite	2	99	122	111	16.4
4	Total Kjeldahl Nitrogen	1	104	104	104	40.0
I3	Sulphate	1	99	99	99	2.5

NOTE: (1) - Only those parameters for which travelling spikes were required are presented.

(2) - Recovery = Actual value divided by expected value X 100%

(3) - SPIKE/RMDL = Expected value of the spiked sample divided by Regulation Method Detection Limit

TABLE C11.5 Range of Recoveries and Ratio of Spiked Quantity to the Regulation Method Detection Limit for Spiked Samples for Found Parameters (1)

ATG	Parameter	Number of Observations	Recovery (2) (%) Minimum	Maximum	Average	SPIKE/RMDL (3)
4	Nitrate+Nitrite	1	122	122	122	26.0
4	Total Kjeldahl Nitrogen	1	100	100	100	70.1
I3	Sulphate	1	96	96	96	5.0

NOTE: (1) - Only those parameters for which spiked samples were required are presented.

(2) - Recovery = Actual value divided by expected value X 100%

(3) - SPIKE/RMDL = Expected value of the spiked sample divided by Regulation Method Detection Limit

TABLE C11.6 Absolute Value of the Difference Between Effluent Monitoring and Duplicate Sample Concentration Divided by the Regulation Method Detection Limit for Found Parameters

Parameter	Number of Observations	Difference Ratios (1) Minimum	Maximum	Average
Ammonia plus Ammonium	12	.10	44.80	5.48
Zinc	6	.40	13.00	3.91
Nitrate+Nitrite	12	.20	16.22	3.59
Phenolics (4AAP)	3	.40	7.30	3.33
Aluminum	7	.00	8.33	2.55
Total Kjeldahl Nitrogen	13	.00	6.67	1.40
Sulphate	12	.01	9.01	1.07
DOC	7	.40	1.80	.83
Copper	3	.03	1.59	.65
Strontium	3	.15	1.50	.62
Total phosphorus	9	.04	1.02	.41
Total suspended solids	10	.04	.80	.35
TOC	7	.00	2.10	.30
Chloride	2	.25	.25	.25
Boron	3	.10	.40	.21

TABLE C11.7 Absolute Value of the Difference Between Effluent Monitoring and Split Sample Concentration Divided by the Regulation Method Detection Limit for Found Parameters

Parameter	Number of Observations	Difference Ratios (1) Minimum	Maximum	Average
Nitrate+Nitrite	1	14.56	14.56	14.56
Chloride	1	3.95	3.95	3.95
Ammonia plus Ammonium	1	2.80	2.80	2.80
Total suspended solids	1	1.80	1.80	1.80
Aluminum	1	1.73	1.73	1.73
Total Kjeldahl Nitrogen	1	.63	.63	.63
Total phosphorus	1	.57	.57	.57
Copper	1	.42	.42	.42
Strontium	1	.35	.35	.35
Zinc	1	.30	.30	.30
Sulphate	1	.28	.28	.28
TOC	1	.06	.06	.06
Boron	1	.00	.00	.00
Phenolics (4AAP)	1	.00	.00	.00

NOTE: (1) Difference Ratio = Absolute Value of the Difference in Concentration Divided by the Regulation Method Detection Limit

TABLE C11.8 Absolute Value of the Difference Between Uncorrected Monitoring Sample Concentration and Corrected Monitoring Sample Concentration Divided by the Regulation Method Detection Limit for Found Parameters

Parameter	Number of Observations	Difference Ratios (1) Minimum	Maximum	Average
Chloromethane	4	.00	.47	.12
Chloroform	4	.00	.11	.03

NOTE: (1) Difference Ratio = Absolute Value of the Difference in Concentration Divided by the Regulation Method Detection Limit

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CO 0300 - Final Effluent

TABLE C13.1 Detection Frequencies and Concentration Ratios for Found Parameters Monitored Daily, Thrice-Weekly or Weekly in Effluent

Parameter	Number of Observations	Class	Frequency of Detection (%) >RMDL	>2RMDL	>5RMDL	Concentration Ratios (1) Minimum	Maximum	Average
Sulphate	154	FH	100	100	100	140.00	500.00	338.21
Total phosphorus	361	FH	100	98	74	1.40	17.30	6.45
Total Kjeldahl Nitrogen	52	FM	94	75	10	.32	18.00	3.29
Total suspended solids	361	FL	81	23	0	.60	3.80	1.55
Ammonia plus Ammonium	52	FM	75	54	29	.10	32.80	4.35
Nitrate+Nitrite	52	FM	69	52	19	.10	10.80	3.03
Aluminum	52	FL	69	37	8	.30	18.33	2.30
Zinc	52	IL	31	15	0	.40	4.30	1.02
Oil and grease	52	IL	31	2	0	.96	2.20	1.06

TABLE C13.2 Detection Frequencies and Concentration Ratios For Found Parameters Monitored Monthly, Quarterly or Semi-Annually in Effluent

Parameter	Number of Observations	Class	Frequency of Detection (%) >RMDL	>2RMDL	>5RMDL	Concentration Ratios (1) Minimum	Maximum	Average
Chloride	2	FH	100	100	100	20.00	22.00	21.00
DOC	12	FH	100	100	100	10.00	26.00	15.20
Strontium	12	FH	100	100	100	25.00	60.00	41.13
COD	2	FM	100	100	0	3.90	4.00	3.95
Phenolics (4AAP)	12	FM	100	92	8	1.50	25.00	4.38
Sulphide	2	FL	100	50	0	1.00	3.00	2.00
Boron	12	FL	100	25	0	1.16	2.20	1.75
TOC	8	FL	100	0	0	1.12	1.58	1.38

TABLE C13.3 Detection Frequencies and Concentration Ratios for Found Parameters in Travelling Blanks

Parameter	Number of Observations	Frequency of Detection >RMDL (%)	Concentration Ratios (1) Minimum	Maximum	Average
Aluminum	4	25	.30	4.67	1.39
Oil and grease	4	0	.96	.96	.96
Total Kjeldahl Nitrogen	4	25	.32	2.44	.93
Total suspended solids	7	0	.91	.91	.91
Zinc	4	25	.40	2.30	.90
DOC	4	25	.70	1.00	.80
Total phosphorus	12	0	.20	.57	.32
Phenolics (4AAP)	4	0	.10	.50	.31
TOC	4	0	.10	.66	.24
Ammonia plus Ammonium	4	0	.10	.20	.12
Sulphate	12	0	.10	.20	.12
Nitrate+Nitrite	4	0	.10	.13	.11
Boron	4	0	.10	.10	.10
Strontium	4	0	.10	.10	.10

NOTE: (1) Concentration Ratio = Concentration Divided by Regulation Method Detection Limit

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CO 0300 - Final Effluent

TABLE C13.4 Absolute Value of the Difference Between Effluent Monitoring and Duplicate Sample Concentration Divided by the Regulation Method Detection Limit for Found Parameters

Parameter	Number of Observations	Difference Ratios (1) Minimum	Maximum	Average
Strontium	1	2.00	2.00	2.00
Zinc	1	1.80	1.80	1.80
Phenolics (4AAP)	1	.50	.50	.50
Aluminum	1	.40	.40	.40
Oil and grease	3	.00	.14	.05
Boron	1	.04	.04	.04
Ammonia plus Ammonium	1	.00	.00	.00
DOC	1	.00	.00	.00
Nitrate+Nitrite	1	.00	.00	.00
Sulphate	5	.00	.00	.00
Total Kjeldahl Nitrogen	1	.00	.00	.00
Total phosphorus	3	.00	.00	.00
Total suspended solids	3	.00	.00	.00

TABLE C13.5 Absolute Value of the Difference Between Effluent Monitoring and Split Sample Concentration Divided by the Regulation Method Detection Limit for Found Parameters

Parameter	Number of Observations	Difference Ratios (1) Minimum	Maximum	Average
Sulphate	7	.00	20.00	9.14
Aluminum	3	.47	2.07	1.07
DOC	3	.40	1.80	1.00
Total Kjeldahl Nitrogen	3	.20	.80	.53
Strontium	3	.00	1.00	.50
Zinc	3	.00	.70	.37
Nitrate+Nitrite	3	.00	.40	.17
Phenolics (4AAP)	3	.00	.50	.17
Boron	3	.04	.20	.11
Total suspended solids	9	.00	.20	.04
Total phosphorus	9	.00	.20	.04
Oil and grease	1	.03	.03	.03
Ammonia plus Ammonium	3	.00	.08	.03
TOC	2	.00	.04	.02

NOTE: (1) Difference Ratio = Absolute Value of the Difference in Concentration Divided by the Regulation Method Detection Limit

TABLE C15.1 Detection Frequencies and Concentration Ratios for Found Parameters Monitored Daily, Thrice-Weekly or Weekly in Effluent

Parameter	Number of Observations	Class	Frequency of Detection (%) >RMDL	>2RMDL	>5RMDL	Concentration Ratios (1) Minimum	Maximum	Average
Ammonia plus Ammonium	363	FH	100	100	100	112.00	1,520.00	447.80
DOC	51	FH	100	100	100	28.00	320.00	65.07
Phenolics (4AAP)	51	FH	100	100	100	5.50	185.00	42.76
Nitrate+Nitrite	362	FH	100	100	99	3.68	1,720.00	369.94
TOC	50	FH	100	100	66	2.80	28.00	6.19
Total Kjeldahl Nitrogen	363	FH	99	98	98	.32	820.00	244.89
Tetrachloroethylene	51	FH	98	98	98	.18	309.09	40.48
Copper	51	FM	98	92	20	.60	96.00	5.63
Total suspended solids	362	FH	98	94	81	.84	3,400.00	39.97
Aluminum	51	FM	96	88	33	.30	633.33	19.79
Total phosphorus	51	FH	88	84	76	.69	73.00	13.56
Vanadium	51	FM	86	59	22	.50	106.67	6.67
Zinc	51	FL	86	49	8	.40	150.00	5.29
Mercury	51	FL	82	41	0	.19	3.40	1.68
Oil and grease	51	FM	78	53	6	.96	900.90	20.41
Chloroform	51	FM	76	65	37	.57	17.14	4.21
1,1-Dichloroethane	51	FL	63	20	0	.63	3.62	1.34
Trichloroethylene	51	FL	63	12	2	.16	5.00	1.24
Phenol	51	FM	59	55	45	.46	35.42	5.76
PCBT	51	IM	29	20	6	.50	120.00	3.77
1,1-Dichloroethylene	51	IL	18	0	0	.14	1.46	.67

TABLE C15.2 Detection Frequencies and Concentration Ratios For Found Parameters Monitored Monthly, Quarterly or Semi-Annually in Effluent

Parameter	Number of Observations	Class	Frequency of Detection (%) >RMDL	>2RMDL	>5RMDL	Concentration Ratios (1) Minimum	Maximum	Average
COD	4	FH	100	100	100	6.60	8.30	7.33
Chloride	4	FH	100	100	100	26.00	70.00	48.50
Strontium	12	FH	100	100	100	6.00	19.00	13.33
Sulphate	4	FH	100	100	100	46.00	172.00	103.50
Cyanide Total	4	FH	100	100	75	2.60	182.00	64.20
Boron	12	FL	100	42	0	1.24	3.60	2.11
Volatile suspended solids	4	FL	100	25	0	1.10	3.60	1.88
Octachlorodibenzo-p-dioxin	13	FH	92	92	92	.67	50.00	25.33
Total H7CDD	13	FH	85	85	69	.57	17.67	7.33
Trans-1,2-Dichloroethylene	13	FM	85	85	31	.29	12.86	4.38
Sulphide	4	FM	75	75	25	.95	8.50	4.24
Total H7CDF	13	FL	62	31	8	.67	5.67	2.09
Octachlorodibenzofuran	13	FL	46	8	0	.73	2.70	1.24
Bromoform	13	IH	38	8	8	.10	7.84	1.08
Total H6CDF	13	IL	31	15	0	.75	3.70	1.22

NOTE: (1) Concentration Ratio = Concentration Divided by Regulation Method Detection Limit

TABLE C15.3A Detection Frequencies and Concentration Ratios for Found Parameters in Travelling Blanks

Parameter	Number of Observations	Frequency of Detection >RMDL (%)	Concentration Ratios (1) Minimum	Maximum	Average
Total suspended solids	1	100	92.00	92.00	92.00
Strontium	4	25	.10	13.00	3.33
Zinc	4	25	.40	12.00	3.30
PCBT	4	25	.50	5.00	1.62
Total Kjeldahl Nitrogen	11	36	.32	5.00	1.17
Oil and grease	4	25	.96	1.00	.97
DOC	4	50	.70	1.20	.95
Total phosphorus	4	25	.69	1.30	.85
Total H6CDF	4	0	.75	.75	.75
Octachlorodibenzofuran	4	0	.73	.73	.73
Octachlorodibenzo-p-dioxin	4	0	.67	.67	.67
Total H7CDF	4	0	.67	.67	.67
1,1-Dichloroethane	4	0	.63	.63	.63
Chloroform	4	0	.57	.57	.57
Total H7CDD	4	0	.57	.57	.57
Phenol	4	0	.46	.46	.46
Aluminum	4	0	.30	.87	.46
Phenolics (4AAP)	4	0	.15	.50	.41
Ammonia plus Ammonium	11	9	.10	2.48	.40
Nitrate+Nitrite	11	9	.10	2.84	.35
Trans-1,2-Dichloroethylene	4	0	.29	.29	.29
TOC	4	0	.10	.46	.21
Copper	4	0	.20	.20	.20
Mercury	4	0	.19	.19	.19
Tetrachloroethylene	4	0	.18	.18	.18
Trichloroethylene	4	0	.16	.16	.16
1,1-Dichloroethylene	4	0	.14	.14	.14
Boron	4	0	.10	.10	.10
Bromoform	4	0	.10	.10	.10

NOTE: (1) Concentration Ratio = Concentration Divided by Regulation Method Detection Limit

TABLE C15.3B Absolute Value of the Difference Between Uncorrected Travelling Blank Concentration and Corrected Travelling Blank Concentration Divided by the Regulation Method Detection Limit for Found Parameters

Parameter	Number of Observations	Difference Ratios (1) Minimum	Maximum	Average
Chloroform	4	.00	3.86	1.07
1,1-Dichloroethylene	4	.00	.21	.05
Tetrachloroethylene	4	.00	.09	.02
1,1-Dichloroethane	4	.00	.00	.00
Bromoform	4	.00	.00	.00
Trans-1,2-Dichloroethylene	4	.00	.00	.00
Trichloroethylene	4	.00	.00	.00

NOTE: (1) Difference Ratio = Absolute Value of the Difference in Concentration Divided by the Regulation Method Detection Limit

TABLE C15.4A Range of Recoveries and Ratio of Spiked Quantity to the Regulation Method Detection Limit for Found Parameters (1)

ATG	Parameter	Number of Observations	Recovery (2) (%) Minimum	Maximum	Average	SPIKE/RMDL (3)
16	1,1-Dichloroethane	4	90	105	98	25.0
16	1,1-Dichloroethylene	4	65	110	88	7.1
16	Bromoform	4	95	110	101	5.4
16	Chloroform	4	60	115	88	28.6
16	Tetrachloroethylene	4	85	95	93	18.2
16	Trans-1,2-Dichloroethylene	4	85	105	96	14.3
16	Trichloroethylene	4	80	115	101	10.5
20	Phenol	3	9	29	22	8.3
24	Octachlorodibenzo-p-dioxin	4	70	104	84	44.4
24	Octachlorodibenzofuran	4	65	112	87	44.4
24	Total H6CDF	4	68	130	106	127.8
24	Total H7CDD	4	80	130	105	22.7
24	Total H7CDF	4	88	136	115	43.5
27	PCBT	4	80	105	92	60.0

NOTE: (1) - Only those parameters for which travelling spikes were required are presented.

(2) - Recovery = Actual value divided by expected value X 100%

(3) - SPIKE/RMDL = Expected value of the spiked sample divided by Regulation Method Detection Limit

TABLE C15.4B Absolute Value of the Difference Between Uncorrected Travelling Spiked Blank Sample Concentration and Corrected Travelling Spiked Blank Sample Concentration Divided by the Regulation Method Detection Limit for Found Parameters

Parameter	Number of Observations	Difference Ratios (1) Minimum	Maximum	Average
Chloroform	4	.00	4.29	1.43
1,1-Dichloroethylene	4	.00	.71	.27
Tetrachloroethylene	4	.00	.91	.23
1,1-Dichloroethane	4	.00	.00	.00
Bromoform	4	.00	.00	.00
Trans-1,2-Dichloroethylene	4	.00	.00	.00
Trichloroethylene	4	.00	.00	.00

NOTE: (1) Difference Ratio = Absolute Value of the Difference in Concentration Divided by the Regulation Method Detection Limit

TABLE C15.5A Absolute Value of the Difference Between Effluent Monitoring and Duplicate Sample Concentration Divided by the Regulation Method Detection Limit for Found Parameters

Parameter	Number of Observations	Difference Ratios (1) Minimum	Maximum	Average
Total Kjeldahl Nitrogen	1	80.00	80.00	80.00
Nitrate+Nitrite	1	40.00	40.00	40.00
Total suspended solids	1	16.60	16.60	16.60
Tetrachloroethylene	3	.91	6.36	3.33
Oil and grease	2	.30	1.70	1.00
Chloroform	3	.00	.57	.19
Trichloroethylene	3	.05	.26	.14
1,1-Dichloroethane	3	.00	.25	.13
Trans-1,2-Dichloroethylene	3	.00	.29	.10
1,1-Dichloroethylene	3	.00	.04	.02
Bromoform	3	.00	.05	.02
Ammonia plus Ammonium	1	.00	.00	.00

TABLE C15.5B Absolute Value of the Difference Between Uncorrected Duplicate Concentration and Corrected Duplicate Concentration Divided by the Regulation Method Detection Limit for Found Parameters

Parameter	Number of Observations	Difference Ratios (1) Minimum	Maximum	Average
Chloroform	3	2.14	6.29	3.95
1,1-Dichloroethylene	3	.00	.89	.37
1,1-Dichloroethane	3	.00	.00	.00
Bromoform	3	.00	.00	.00
Tetrachloroethylene	3	.00	.00	.00
Trans-1,2-Dichloroethylene	3	.00	.00	.00
Trichloroethylene	3	.00	.00	.00

NOTE: (1) Difference Ratio = Absolute Value of the Difference in Concentration Divided by the Regulation Method Detection Limit

TABLE C15.6A Absolute Value of the Difference Between Effluent Monitoring and Split Sample Concentration Divided by the Regulation Method Detection Limit for Found Parameters

Parameter	Number of Observations	Difference Ratios (1) Minimum	Maximum	Average
Ammonia plus Ammonium	10	.00	144.00	30.80
Nitrate+Nitrite	10	.00	120.00	28.80
Total Kjeldahl Nitrogen	10	.00	80.00	20.60
Tetrachloroethylene	1	11.82	11.82	11.82
Trans-1,2-Dichloroethylene	1	8.21	8.21	8.21
Total suspended solids	9	.00	16.60	6.04
Chloroform	1	4.29	4.29	4.29
Octachlorodibenzo-p-dioxin	4	2.67	6.67	3.83
Aluminum	4	.13	8.67	2.47
Phenol	4	.00	7.92	2.29
Total phosphorus	4	.10	3.71	1.63
DOC	4	.00	4.00	1.50
Oil and grease	2	.80	2.20	1.50
Total H7CDD	4	.30	1.67	.91
Trichloroethylene	1	.84	.84	.84
Phenolics (4AAP)	4	.00	2.00	.75
Bromoform	1	.49	.49	.49
Zinc	4	.10	1.30	.48
Total H7CDF	4	.00	1.67	.42
Strontium	4	.00	1.00	.38
Vanadium	4	.00	.67	.21
Mercury	4	.00	.60	.15
1,1-Dichloroethylene	1	.14	.14	.14
Copper	4	.00	.30	.13
Total H6CDF	4	.00	.50	.13
Boron	4	.04	.20	.09
PCBT	4	.00	.30	.08
Octachlorodibenzofuran	4	.00	.17	.08
TOC	4	.00	.20	.05
1,1-Dichloroethane	1	.00	.00	.00

TABLE C15.6B Absolute Value of the Difference Between Uncorrected Split Sample Concentration and Corrected Split Sample Concentration Divided by the Regulation Method Detection Limit for Found Parameters

Parameter	Number of Observations	Difference Ratios (1) Minimum	Maximum	Average
Chloroform	1	1.43	1.43	1.43
1,1-Dichloroethane	1	.00	.00	.00
1,1-Dichloroethylene	1	.00	.00	.00
Bromoform	1	.00	.00	.00
Tetrachloroethylene	1	.00	.00	.00
Trans-1,2-Dichloroethylene	1	.00	.00	.00
Trichloroethylene	1	.00	.00	.00

NOTE: (1) Difference Ratio = Absolute Value of the Difference in Concentration Divided by the Regulation Method Detection Limit

TABLE C15.7 Absolute Value of the Difference Between Uncorrected Monitoring Sample Concentration and Corrected Monitoring Sample Concentration Divided by the Regulation Method Detection Limit for Found Parameters

Parameter	Number of Observations	Difference Ratios (1) Minimum	Maximum	Average
Chloroform	51	.00	8.71	1.63
Tetrachloroethylene	51	.00	13.64	.59
1,1-Dichloroethylene	51	.00	.96	.13
Trans-1,2-Dichloroethylene	13	.00	.93	.07
Trichloroethylene	51	.00	1.26	.05
1,1-Dichloroethane	51	.00	.00	.00
Bromoform	13	.00	.00	.00

NOTE: (1) Difference Ratio = Absolute Value of the Difference in Concentration Divided by the Regulation Method Detection Limit

QA/QC Data for Norton (Page 1 of 3)
CO 0300 - Sewer C

TABLE C16.1 Detection Frequencies and Concentration Ratios for Found Parameters Monitored Daily, Thrice-Weekly or Weekly in Effluent

Parameter	Number of Observations	Class	Frequency of Detection (%) >RMDL	>2RMDL	>5RMDL	Concentration Ratios (1) Minimum	Maximum	Average
Aluminum	144	FH	100	100	99	3.67	613.33	71.53
Sulphate	143	FH	100	100	99	4.80	152.00	47.68
DOC	48	FM	100	94	23	1.20	13.40	4.02
Copper	48	FL	79	44	10	.50	20.90	2.21
Total suspended solids	340	FM	76	58	24	.40	113.60	3.77
Total Kjeldahl Nitrogen	47	FL	68	43	0	.14	4.90	1.95
Zinc	48	FL	67	33	10	.20	21.70	2.65
Ammonia plus Ammonium	47	FL	57	45	11	.10	51.60	3.09
Oil and grease	47	FL	51	30	2	1.00	5.00	1.43
Nitrate+Nitrite	47	IL	34	4	0	.80	2.40	1.00
Chromium	48	IL	19	2	0	.10	4.51	.74
Total phosphorus	45	IL	13	4	2	.10	8.80	.59
Molybdenum	48	IL	8	0	0	.10	1.50	.46
Mercury	48	IL	2	0	0	.80	1.10	.81

TABLE C16.2 Detection Frequencies and Concentration Ratios For Found Parameters Monitored Monthly, Quarterly or Semi-Annually in Effluent

Parameter	Number of Observations	Class	Frequency of Detection (%) >RMDL	>2RMDL	>5RMDL	Concentration Ratios (1) Minimum	Maximum	Average
Chloride	2	FH	100	100	100	10.30	11.00	10.65
Strontium	11	FH	100	100	100	7.05	83.50	27.26
COD	2	FL	50	0	0	.70	1.50	1.10
Chloroform	2	FL	50	0	0	1.00	1.29	1.14
Methylene chloride	2	FL	50	0	0	.92	1.54	1.23
Boron	11	IL	36	0	0	.40	1.60	.91
Vanadium	11	IL	18	0	0	.10	1.53	.47
Lead	11	IM	9	9	0	.33	2.67	.96
Cadmium	11	IL	9	0	0	.35	1.25	.81

NOTE: (1) Concentration Ratio = Concentration Divided by Regulation Method Detection Limit

TABLE C16.3 Detection Frequencies and Concentration Ratios for Found Parameters in Travelling Blanks

Parameter	Number of Observations	Frequency of Detection >RMDL (%)	Concentration Ratios (1) Minimum	Maximum	Average
Oil and grease	1	100	2.00	2.00	2.00
DOC	2	50	.80	1.40	1.10
Cadmium	3	0	.55	1.00	.85
Nitrate+Nitrite	3	0	.80	.80	.80
Mercury	2	0	.80	.80	.80
Total suspended solids	2	50	.40	1.00	.70
Zinc	3	33	.20	1.10	.55
Aluminum	4	0	.33	1.00	.50
Lead	3	0	.33	.57	.41
Boron	3	0	.30	.40	.37
Copper	3	0	.20	.40	.27
Chromium	3	0	.10	.45	.26
Total Kjeldahl Nitrogen	2	0	.14	.14	.14
Molybdenum	3	0	.10	.15	.13
Ammonia plus Ammonium	2	0	.10	.10	.10
Strontium	3	0	.10	.10	.10
Sulphate	3	0	.10	.10	.10
Vanadium	3	0	.10	.10	.10
Total phosphorus	1	0	.10	.10	.10

NOTE: (1) Concentration Ratio = Concentration Divided by Regulation Method Detection Limit

TABLE C16.4 Absolute Value of the Difference Between Effluent Monitoring and Duplicate Sample Concentration Divided by the Regulation Method Detection Limit for Found Parameters

Parameter	Number of Observations	Difference Ratios (1) Minimum	Maximum	Average
Aluminum	4	2.33	7.00	4.67
Chromium	2	.25	4.19	2.22
Sulphate	3	.00	3.20	1.20
Ammonia plus Ammonium	2	.04	2.29	1.17
Total suspended solids	3	.00	1.80	1.07
Strontium	2	.40	1.70	1.05
Boron	2	.40	.68	.54
Total Kjeldahl Nitrogen	2	.34	.74	.54
Oil and grease	2	.00	1.00	.50
Copper	2	.10	.60	.35
Zinc	2	.06	.40	.23
Molybdenum	2	.00	.16	.08
Vanadium	2	.00	.06	.03
Cadmium	2	.00	.00	.00
DOC	2	.00	.00	.00
Lead	2	.00	.00	.00
Mercury	2	.00	.00	.00
Nitrate+Nitrite	2	.00	.00	.00

NOTE: (1) Difference Ratio = Absolute Value of the Difference in Concentration Divided by the Regulation Method Detection Limit

TABLE C16.5 Absolute Value of the Difference Between Uncorrected Monitoring Sample Concentration and Corrected Monitoring Sample Concentration Divided by the Regulation Method Detection Limit for Found Parameters

Parameter	Number of Observations	Difference Ratios (1) Minimum	Maximum	Average
Chloroform	2	.00	.00	.00
Methylene chloride	2	.00	.00	.00

NOTE: (1) Difference Ratio = Absolute Value of the Difference in Concentration Divided by the Regulation Method Detection Limit

TABLE C17.1 Detection Frequencies and Concentration Ratios For Found Parameters Monitored Monthly, Quarterly or Semi-Annually in Effluent

Parameter	Number of Observations	Class	Frequency of Detection (%) >RMDL	>2RMDL	>5RMDL	Concentration Ratios (1) Minimum	Maximum	Average
TOC	1	FM	100	100	100	14.40	14.40	14.40
Sulphate	2	FM	100	100	0	3.58	4.14	3.86
DOC	13	FM	100	92	0	1.90	3.76	2.63
Oil and grease	10	FL	70	50	0	.89	3.10	1.82
Total phosphorus	13	IL	15	0	0	.60	1.20	.68
Total suspended solids	13	NO	0	0	0	.10	.80	.22

TABLE C17.2 Detection Frequencies and Concentration Ratios for Found Parameters in Travelling Blanks

Parameter	Number of Observations	Frequency of Detection >RMDL (%)	Concentration Ratios (1) Minimum	Maximum	Average
Oil and grease	3	67	.89	4.30	2.30
Total phosphorus	4	0	.60	.60	.60
DOC	4	25	.20	1.10	.43
Total suspended solids	1	0	.24	.24	.24

NOTE: (1) Concentration Ratio = Concentration Divided by Regulation Method Detection Limit

TABLE C17.3 Absolute Value of the Difference Between Effluent Monitoring and Duplicate Sample Concentration Divided by the Regulation Method Detection Limit for Found Parameters

Parameter	Number of Observations	Difference Ratios (1) Minimum	Maximum	Average
Oil and grease	2	.40	4.70	2.55
DOC	4	.00	.44	.20
Total suspended solids	4	.10	.20	.13
Total phosphorus	4	.00	.40	.10

NOTE: (1) Difference Ratio = Absolute Value of the Difference in Concentration Divided by the Regulation Method Detection Limit

QA/QC Data for Stanchem (Page 1 of 8)
BA 0100 - Conpac Effluent

TABLE C19.1 Detection Frequencies and Concentration Ratios for Found Parameters Monitored Daily, Thrice-Weekly or Weekly in Effluent

Parameter	Number of Observations	Class	Frequency of Detection (%) >RMDL	>2RMDL	>5RMDL	Concentration Ratios (1) Minimum	Maximum	Average
Chloride	156	FH	100	100	100	22.00	5,625.00	691.31
DOC	53	FH	100	100	100	7.80	2,170.00	104.13
Sulphate	156	FH	100	100	100	19.00	912.00	196.42
Copper	157	FH	100	100	98	2.30	920.00	67.89
Lead	157	FH	100	100	92	2.37	181.50	24.26
Cadmium	157	FH	100	99	82	1.00	63.50	12.01
Nickel	56	FM	100	86	50	1.00	126.00	11.93
Zinc	157	FH	99	99	89	1.00	128.60	18.71
Aluminum	157	FH	99	96	85	.90	67.83	12.63
Chloroform	154	FH	99	98	96	.57	1,662.86	70.59
Mercury	154	FH	99	95	83	.80	640.00	31.46
Nitrate+Nitrite	156	FH	98	97	79	.62	5,200.00	227.68
Total suspended solids	248	FH	98	93	81	.80	116.00	16.68
TOC	44	FM	95	59	43	.88	188.00	11.36
Thallium	157	FL	93	8	1	.37	5.33	1.21
Chromium	157	FM	92	69	18	.50	20.50	3.79
Tetrachloroethylene	54	FL	85	41	9	.19	8.09	2.32
Phenolics (4AAP)	53	FM	85	74	43	.90	19.30	5.18
Oil and grease	52	FL	69	44	13	.90	15.40	2.88
Total phosphorus	53	FM	64	51	32	.20	865.00	66.26
Dibromochloromethane	54	IL	26	13	2	.22	97.27	2.60
Antimony	53	IL	19	2	0	.40	3.00	.68

TABLE C19.2 Detection Frequencies and Concentration Ratios For Found Parameters Monitored Monthly, Quarterly or Semi-Annually in Effluent

Parameter	Number of Observations	Class	Frequency of Detection (%) >RMDL	>2RMDL	>5RMDL	Concentration Ratios (1) Minimum	Maximum	Average
Ammonia plus Ammonium	13	FH	100	100	100	8.80	800.00	197.91
Strontium	8	FH	100	100	100	9.10	28.50	14.39
Hexachloroethane	13	FH	100	100	92	4.20	521.00	169.34
Total Kjeldahl Nitrogen	13	FH	100	92	92	1.40	290.00	69.74
Benzene	2	FL	100	50	50	1.36	5.40	3.38
COD	2	FL	100	50	50	1.00	14.00	7.50
Octachlorodibenzo-p-dioxin	2	FL	100	50	50	1.50	18.00	9.75
Octachlorodibenzofuran	2	FL	100	50	50	1.87	6.00	3.93
Hexachlorobenzene	13	FH	92	92	85	.30	144.00	40.37
1,2,4-Trichlorobenzene	13	FM	92	77	31	.30	12.50	4.74
1,2,3-Trichlorobenzene	13	FM	85	85	23	.32	19.80	5.21
Pentachlorobenzene	13	FM	85	62	23	.70	9.30	3.53
Hexachlorobutadiene	13	FM	85	54	23	.69	22.00	4.25
Hexachlorocyclopentadiene	13	FL	85	15	8	.38	6.00	1.86
2,4,5-Trichlorotoluene	13	FM	77	62	38	.14	8.30	3.97
1,2,3,4-Tetrachlorobenzene	13	FM	69	69	31	.12	11.60	3.75
1,2,4,5-Tetrachlorobenzene	13	FL	69	46	0	.11	4.40	2.08
Carbon tetrachloride	14	FL	64	50	43	.23	96.15	21.49
Boron	10	FL	60	40	30	.12	9.00	2.98
Octachlorostyrene	13	FL	46	23	8	.12	9.60	1.72
Selenium	13	FL	46	15	15	.19	22.30	2.77

TABLE C19.2 (cont'd) Detection Frequencies and Concentration Ratios For Found Parameters Monitored Monthly, Quarterly or Semi-Annually in Effluent

Parameter	Number of Observations	Class	Frequency of Detection (%) >RMDL	>2RMDL	>5RMDL	Concentration Ratios (1) Minimum	Maximum	Average
1,2,3,5-Tetrachlorobenzene	13	IM	38	23	0	.21	3.50	1.03
Arsenic	13	IL	38	15	8	.40	5.50	1.23
Beryllium	13	IL	15	0	0	.16	1.20	.58
Molybdenum	13	IL	8	0	0	.20	1.60	.46
Vanadium	12	NO	0	0	0	.13	.90	.34

NOTE: (1) Concentration Ratio = Concentration Divided by Regulation Method Detection Limit

TABLE C19.3A Detection Frequencies and Concentration Ratios for Found Parameters in Travelling Blanks

Parameter	Number of Observations	Frequency of Detection >RMDL (%)	Concentration Ratios (1) Minimum	Maximum	Average
Cadmium	13	77	.10	4.50	3.32
Hexachlorocyclopentadiene	5	100	1.70	1.70	1.70
Aluminum	13	8	.53	6.53	1.23
Phenolics (4AAP)	7	43	1.00	2.00	1.14
Copper	13	69	.60	1.20	1.04
Zinc	13	15	1.00	1.10	1.01
Thallium	13	69	.37	1.10	1.01
1,2,3,4-Tetrachlorobenzene	5	0	1.00	1.00	1.00
1,2,3-Trichlorobenzene	5	20	.20	3.85	.93
DOC	4	50	.34	1.60	.91
Oil and grease	5	0	.90	.90	.90
Mercury	11	18	.80	1.00	.84
Total Kjeldahl Nitrogen	5	0	.78	.78	.78
Chromium	13	0	.45	.90	.77
Beryllium	6	33	.50	1.20	.73
Molybdenum	6	33	.25	1.60	.70
Lead	13	8	.10	2.77	.68
Chloroform	12	17	.57	1.14	.67
Ammonia plus Ammonium	4	0	.60	.60	.60
Arsenic	5	0	.60	.60	.60
Hexachlorobutadiene	5	0	.50	.50	.50
Octachlorostyrene	5	0	.50	.50	.50
Strontium	1	0	.50	.50	.50
Nickel	8	0	.30	.60	.45
Sulphate	10	0	.10	.80	.45
Nitrate+Nitrite	11	0	.10	.64	.44
Antimony	6	0	.40	.40	.40
Pentachlorobenzene	5	0	.40	.40	.40
Selenium	5	0	.40	.40	.40
Dibromochloromethane	10	0	.36	.45	.38
Tetrachloroethylene	10	0	.36	.36	.36
1,2,3,5-Tetrachlorobenzene	5	0	.30	.30	.30
1,2,4,5-Tetrachlorobenzene	5	0	.30	.30	.30
1,2,4-Trichlorobenzene	5	0	.30	.30	.30
2,4,5-Trichlorotoluene	5	0	.30	.30	.30
Hexachlorobenzene	5	0	.30	.30	.30
Hexachloroethane	5	0	.30	.30	.30
Carbon tetrachloride	10	0	.23	.54	.26

TABLE C19.3A (cont'd) Detection Frequencies and Concentration Ratios for Found Parameters in Travelling Blanks

Parameter	Number of Observations	Frequency of Detection >RMDL (%)	Concentration Ratios (1) Minimum	Maximum	Average
Chloride	10	0	.10	.30	.20
Total phosphorus	6	0	.20	.20	.20
Vanadium	4	0	.17	.17	.17
Boron	3	0	.12	.12	.12

NOTE: (1) Concentration Ratio = Concentration Divided by Regulation Method Detection Limit

TABLE C19.3B Absolute Value of the Difference Between Uncorrected Travelling Blank Concentration and Corrected Travelling Blank Concentration Divided by the Regulation Method Detection Limit for Found Parameters

Parameter	Number of Observations	Difference Ratios (1) Minimum	Maximum	Average
Carbon tetrachloride	10	.00	.00	.00
Chloroform	12	.00	.00	.00
Dibromochloromethane	9	.00	.00	.00
Tetrachloroethylene	9	.00	.00	.00

NOTE: (1) Difference Ratio = Absolute Value of the Difference in Concentration Divided by the Regulation Method Detection Limit

TABLE C19.4A Range of Recoveries and Ratio of Spiked Quantity to the Regulation Method Detection Limit for Found Parameters (1)

ATG	Parameter	Number of Observations	Recovery (2) (%) Minimum	Maximum	Average	SPIKE/RMDL (3)
16	Carbon tetrachloride	10	64	123	97	17.4
16	Chloroform	12	68	142	109	31.6
16	Dibromochloromethane	9	86	111	96	21.2
16	Tetrachloroethylene	9	82	112	99	20.7
23	1,2,3,4-Tetrachlorobenzene	5	91	181	112	8.1
23	1,2,3,5-Tetrachlorobenzene	5	88	186	113	8.1
23	1,2,3-Trichlorobenzene	5	90	181	118	13.7
23	1,2,4,5-Tetrachlorobenzene	5	93	183	113	8.1
23	1,2,4-Trichlorobenzene	5	46	175	99	13.7
23	2,4,5-Trichlorotoluene	5	87	177	109	13.7
23	Hexachlorobenzene	5	88	172	109	8.1
23	Hexachlorobutadiene	5	75	116	91	8.1
23	Hexachlorocyclopentadiene	5	14	89	41	8.1
23	Hexachloroethane	5	62	130	87	8.1
23	Octachlorostyrene	5	65	114	90	8.1
23	Pentachlorobenzene	5	93	177	112	8.1

NOTE: (1) - Only those parameters for which travelling spikes were required are presented.

(2) - Recovery = Actual value divided by expected value X 100%

(3) - SPIKE/RMDL = Expected value of the spiked sample divided by Regulation Method Detection Limit

TABLE C19.4B Absolute Value of the Difference Between Uncorrected Travelling Spiked Blank Sample Concentration and Corrected Travelling Spiked Blank Sample Concentration Divided by the Regulation Method Detection Limit for Found Parameters

Parameter	Number of Observations	Difference Ratios (1) Minimum	Maximum	Average
Tetrachloroethylene	9	.00	20.64	2.29
Dibromochloromethane	9	.00	19.45	2.16
Carbon tetrachloride	10	.00	.00	.00
Chloroform	12	.00	.00	.00

NOTE: (1) Difference Ratio = Absolute Value of the Difference in Concentration Divided by the Regulation Method Detection Limit

TABLE C19.5A Absolute Value of the Difference Between Effluent Monitoring and Duplicate Sample Concentration Divided by the Regulation Method Detection Limit for Found Parameters

Parameter	Number of Observations	Difference Ratios (1) Minimum	Maximum	Average
Chloroform	10	.29	41.43	6.23
Nitrate+Nitrite	5	.00	20.00	4.10
Carbon tetrachloride	10	.00	21.54	2.67
Aluminum	4	.00	1.67	.92
Boron	3	.00	1.82	.79
Strontium	3	.00	1.50	.67
Copper	4	.00	1.00	.50
Lead	4	.00	1.00	.45
Cadmium	4	.00	1.00	.38
Zinc	4	.00	1.00	.38
Dibromochloromethane	10	.00	.82	.27
Nickel	4	.00	.50	.21
Oil and grease	1	.20	.20	.20
Vanadium	4	.00	.57	.20
Tetrachloroethylene	10	.00	.36	.15
Chromium	4	.00	.40	.13
Molybdenum	4	.00	.10	.04
Beryllium	4	.00	.00	.00
Thallium	4	.00	.00	.00

TABLE C19.5B Absolute Value of the Difference Between Uncorrected Duplicate Concentration and Corrected Duplicate Concentration Divided by the Regulation Method Detection Limit for Found Parameters

Parameter	Number of Observations	Difference Ratios (1) Minimum	Maximum	Average
Carbon tetrachloride	10	.00	.00	.00
Chloroform	10	.00	.00	.00
Dibromochloromethane	10	.00	.00	.00
Tetrachloroethylene	10	.00	.00	.00

NOTE: (1) Difference Ratio = Absolute Value of the Difference in Concentration Divided by the Regulation Method Detection Limit

TABLE C19.6A Absolute Value of the Difference Between Effluent Monitoring and Split Sample Concentration Divided by the Regulation Method Detection Limit for Found Parameters

Parameter	Number of Observations	Difference Ratios (1) Minimum	Maximum	Average
Hexachloroethane	5	2.70	30.00	15.74
Chloroform	2	2.29	20.51	11.40
Sulphate	13	.00	88.00	10.93
Ammonia plus Ammonium	5	.00	16.00	6.40
Total Kjeldahl Nitrogen	5	.00	20.00	6.00
Hexachlorobenzene	5	.00	12.00	5.30
Nitrate+Nitrite	10	.00	20.00	3.21
1,2,3-Trichlorobenzene	5	.10	7.15	2.88
Cadmium	14	.00	11.50	2.75
Hexachlorobutadiene	5	.00	11.50	2.74
1,2,4-Trichlorobenzene	5	.00	5.80	2.46
Chloride	13	.00	12.00	2.43
Aluminum	14	.00	4.93	1.96
Copper	14	.10	6.60	1.57
2,4,5-Trichlorotoluene	5	.00	3.50	1.54
Molybdenum	1	1.30	1.30	1.30
Zinc	14	.00	5.40	1.26
Mercury	15	.00	5.00	1.15
Tetrachloroethylene	1	1.09	1.09	1.09
Beryllium	1	1.04	1.04	1.04
DOC	5	.00	2.40	1.04
Total suspended solids	7	.00	3.20	1.03
Phenolics (4AAP)	8	.25	3.50	1.01
Nickel	11	.00	2.80	.83
1,2,3,4-Tetrachlorobenzene	5	.00	2.00	.82
Pentachlorobenzene	5	.20	1.00	.74
1,2,4,5-Tetrachlorobenzene	5	.00	1.40	.68
Lead	14	.00	1.87	.63
Octachlorostyrene	5	.00	2.00	.52
Chromium	14	.00	1.30	.40
Oil and grease	4	.00	.50	.25
Thallium	14	.00	1.10	.25
Selenium	5	.00	.78	.22
Total phosphorus	5	.00	.40	.18
1,2,3,5-Tetrachlorobenzene	5	.00	.40	.10
TOC	4	.04	.14	.10
Antimony	5	.00	.32	.08
Arsenic	5	.00	.22	.04
Carbon tetrachloride	1	.00	.00	.00
Dibromochloromethane	1	.00	.00	.00
Hexachlorocyclopentadiene	5	.00	.00	.00

NOTE: (1) Difference Ratio = Absolute Value of the Difference in Concentration Divided by the Regulation Method Detection Limit

TABLE C19.6B Absolute Value of the Difference Between Uncorrected Split Sample Concentration and Corrected Split Sample Concentration Divided by the Regulation Method Detection Limit for Found Parameters

Parameter	Number of Observations	Difference Ratios (1) Minimum	Maximum	Average
Carbon tetrachloride	1	.00	.00	.00
Chloroform	2	.00	.00	.00
Dibromochloromethane	1	.00	.00	.00
Tetrachloroethylene	1	.00	.00	.00

TABLE C19.7 Absolute Value of the Difference Between Uncorrected Monitoring Sample Concentration and Corrected Monitoring Sample Concentration Divided by the Regulation Method Detection Limit for Found Parameters

Parameter	Number of Observations	Difference Ratios (1) Minimum	Maximum	Average
Benzene	2	1.22	2.60	1.91
Chloroform	154	.00	132.43	.95
Tetrachloroethylene	54	.00	1.63	.03
Carbon tetrachloride	13	.00	.18	.01
Dibromochloromethane	54	.00	.51	.01

NOTE: (1) Difference Ratio = Absolute Value of the Difference in Concentration Divided by the Regulation Method Detection Limit

QA/QC Data for Sulco (Page 1 of 3)
CO 0100 - Final Effluent

TABLE C20.1 Detection Frequencies and Concentration Ratios for Found Parameters Monitored Daily, Thrice-Weekly or Weekly in Effluent

Parameter	Number of Observations	Class	Frequency of Detection (%) >RMDL	>2RMDL	>5RMDL	Concentration Ratios (1) Minimum	Maximum	Average
Chloride	147	FH	100	100	100	141.00	2,380.00	912.98
Nitrate+Nitrite	47	FH	100	100	100	8.32	115.40	38.77
Sulphate	147	FH	100	100	100	135.20	1,578.00	327.53
Zinc	124	FH	100	100	98	3.30	134.00	33.61
Total phosphorus	144	FH	100	100	72	2.00	16.20	6.66
Aluminum	147	FH	100	99	74	1.67	31.00	7.99
DOC	46	FH	96	93	85	1.00	30.40	9.87
Total suspended solids	352	FL	85	33	4	.80	302.00	2.97
Cyanide Total	50	FM	80	66	32	1.00	25.40	5.80
Oil and grease	49	FL	61	47	10	.23	8.10	2.26
Vanadium	147	FL	47	26	6	.10	26.40	1.77
Phenolics (4AAP)	152	FL	44	19	10	.40	23.50	1.79
Sulphide	49	IM	24	14	2	.75	5.50	1.18
Arsenic	147	IL	24	3	0	.36	2.40	1.10

TABLE C20.2 Detection Frequencies and Concentration Ratios For Found Parameters Monitored Monthly, Quarterly or Semi-Annually in Effluent

Parameter	Number of Observations	Class	Frequency of Detection (%) >RMDL	>2RMDL	>5RMDL	Concentration Ratios (1) Minimum	Maximum	Average
Strontium	12	FH	100	100	100	150.00	600.00	332.25
COD	2	FM	100	100	50	3.10	10.00	6.55
Copper	12	FM	100	100	8	2.00	14.00	3.70
Boron	12	FM	100	83	8	1.20	12.00	3.47
TOC	3	FL	100	33	0	1.00	2.20	1.57
Nickel	12	FL	75	42	0	.10	4.50	1.90
Total Kjeldahl Nitrogen	12	FL	67	42	0	.60	4.80	1.71
Cadmium	12	FM	58	58	17	.50	7.00	2.58
Ammonia plus Ammonium	12	FL	42	8	0	.20	3.88	1.03
Cobalt	11	IL	36	18	0	.10	2.00	.88
Lead	12	IL	33	17	0	.33	3.73	1.13
Chromium	12	NO	0	0	0	.10	.50	.27

NOTE: (1) Concentration Ratio = Concentration Divided by Regulation Method Detection Limit

TABLE C20.3 Detection Frequencies and Concentration Ratios for Found Parameters in Travelling Blanks

Parameter	Number of Observations	Frequency of Detection >RMDL (%)	Concentration Ratios (1) Minimum	Maximum	Average
Zinc	12	17	.10	29.00	3.08
DOC	4	25	.80	1.40	1.05
Oil and grease	4	25	.25	3.30	1.01
Cyanide Total	4	0	1.00	1.00	1.00
Arsenic	12	0	.36	1.00	.84
Nitrate+Nitrite	4	25	.48	1.60	.82
Sulphide	4	0	.75	.90	.79
TOC	3	0	.34	.94	.74
Cadmium	4	0	.50	1.00	.70
Sulphate	12	8	.12	6.40	.69
Total phosphorus	12	8	.10	1.40	.52
Ammonia plus Ammonium	4	25	.19	1.24	.51
Total Kjeldahl Nitrogen	4	0	.35	.80	.49
Phenolics (4AAP)	12	8	.40	1.00	.45
Chloride	12	0	.10	.80	.43
Aluminum	12	8	.10	2.00	.37
Lead	4	0	.33	.43	.36
Strontium	4	0	.24	.30	.26
Chromium	4	0	.10	.33	.18
Boron	4	0	.10	.40	.18
Vanadium	12	0	.10	.37	.17
Nickel	4	0	.10	.21	.14
Copper	4	0	.10	.18	.12
Cobalt	4	0	.10	.15	.11

NOTE: (1) Concentration Ratio = Concentration Divided by Regulation Method Detection Limit

TABLE C20.4 Absolute Value of the Difference Between Effluent Monitoring and Duplicate Sample Concentration Divided by the Regulation Method Detection Limit for Found Parameters

Parameter	Number of Observations	Difference Ratios (1) Minimum	Maximum	Average
Oil and grease	1	.80	.80	.80
Sulphide	4	.00	.75	.19

NOTE: (1) Difference Ratio = Absolute Value of the Difference in Concentration Divided by the Regulation Method Detection Limit

TABLE C20.5 Absolute Value of the Difference Between Uncorrected Split Sample Concentration and Corrected Split Sample Concentration Divided by the Regulation Method Detection Limit for Found Parameters

Parameter	Number of Observations	Difference Ratios (1) Minimum	Maximum	Average
Strontium	4	5.00	34.00	19.13
Chloride	12	.00	80.00	17.29
Sulphate	12	.00	26.00	9.00
Nitrate+Nitrite	4	.20	4.80	2.04
Zinc	9	.30	5.00	1.65
Oil and grease	3	.00	4.00	1.33
Total phosphorus	12	.00	6.20	1.27
Aluminum	12	.00	4.33	1.09
DOC	4	.20	1.20	.65
Boron	4	.00	1.02	.41
Lead	4	.00	.97	.38
Copper	4	.00	.97	.27
Nickel	4	.03	.50	.25
Cyanide Total	4	.00	.40	.20
Phenolics (4AAP)	12	.00	.70	.20
Total Kjeldahl Nitrogen	4	.10	.30	.20
Ammonia plus Ammonium	4	.04	.24	.15
Cadmium	4	.00	.60	.15
Cobalt	4	.00	.50	.14
Arsenic	12	.00	.50	.09
Chromium	4	.05	.10	.07
Total suspended solids	12	.00	.20	.07
Vanadium	12	.00	.17	.06

NOTE: (1) Difference Ratio = Absolute Value of the Difference in Concentration Divided by the Regulation Method Detection Limit

TABLE C24.1 Detection Frequencies and Concentration Ratios for Found Parameters Monitored Daily, Thrice-Weekly or Weekly in Effluent

Parameter	Number of Observations	Class	Frequency of Detection (%) >RMDL	>2RMDL	>5RMDL	Concentration Ratios (1) Minimum	Maximum	Average
Chloride	156	FH	100	100	100	7.00	420.00	75.29
Sulphate	156	FH	100	100	100	5.80	200.00	48.08
DOC	52	FH	98	98	75	.70	162.00	14.68
Nitrate+Nitrite	49	FM	96	78	6	.32	16.00	3.33
Oil and grease	51	FL	67	37	6	.96	7.60	2.09
Total phosphorus	52	IL	19	4	2	.69	5.30	.90
Total suspended solids	363	IL	14	5	1	.80	56.00	1.16

TABLE C24.2 Detection Frequencies and Concentration Ratios For Found Parameters Monitored Monthly, Quarterly or Semi-Annually in Effluent

Parameter	Number of Observations	Class	Frequency of Detection (%) >RMDL	>2RMDL	>5RMDL	Concentration Ratios (1) Minimum	Maximum	Average
Strontium	12	FH	100	100	100	30.00	80.00	50.04
Aluminum	12	FM	100	83	42	1.13	16.00	6.94
Boron	12	FL	100	8	0	1.00	2.40	1.53
Zinc	12	FM	92	92	50	.40	15.00	5.29
Phenolics (4AAP)	12	FL	92	42	8	.50	9.00	2.29
TOC	5	IL	20	0	0	.30	1.16	.62
Chromium	12	IL	8	0	0	.15	1.45	.54
Copper	12	NO	0	0	0	.20	.80	.39

TABLE C24.3 Detection Frequencies and Concentration Ratios for Found Parameters in Travelling Blanks

Parameter	Number of Observations	Frequency of Detection >RMDL (%)	Concentration Ratios (1) Minimum	Maximum	Average
Aluminum	4	50	.30	16.00	4.43
Oil and grease	4	25	.96	1.50	1.10
Zinc	4	25	.40	2.60	.95
DOC	4	25	.70	1.40	.90
Total phosphorus	4	0	.69	.70	.69
TOC	4	25	.10	1.80	.56
Phenolics (4AAP)	4	0	.15	.50	.24
Copper	4	0	.20	.20	.20
Chloride	12	0	.15	.15	.15
Chromium	4	0	.10	.20	.13
Strontium	4	0	.10	.15	.11
Boron	4	0	.10	.10	.10
Nitrate+Nitrite	4	0	.10	.10	.10
Sulphate	12	0	.10	.10	.10

NOTE: (1) Concentration Ratio = Concentration Divided by Regulation Method Detection Limit

TABLE C24.4 Absolute Value of the Difference Between Effluent Monitoring and Duplicate Sample Concentration Divided by the Regulation Method Detection Limit for Found Parameters

Parameter	Number of Observations	Difference Ratios (1) Minimum	Maximum	Average
Strontium	1	5.00	5.00	5.00
Sulphate	5	.00	2.00	.64
Chloride	5	.00	1.50	.40
Chromium	1	.40	.40	.40
Total suspended solids	5	.00	1.40	.40
Aluminum	1	.27	.27	.27
Copper	1	.20	.20	.20
Zinc	1	.10	.10	.10
Nitrate+Nitrite	1	.04	.04	.04
Boron	1	.00	.00	.00
DOC	1	.00	.00	.00
Oil and grease	1	.00	.00	.00
Phenolics (4AAP)	1	.00	.00	.00
Total phosphorus	1	.00	.00	.00

TABLE C24.5 Absolute Value of the Difference Between Effluent Monitoring and Split Sample Concentration Divided by the Regulation Method Detection Limit for Found Parameters

Parameter	Number of Observations	Difference Ratios (1) Minimum	Maximum	Average
Chloride	7	.00	50.50	11.00
Sulphate	7	.00	22.80	6.40
Strontium	3	1.00	5.00	2.33
Zinc	3	.20	2.40	1.60
DOC	3	1.20	2.00	1.53
Aluminum	3	.27	1.47	.80
Oil and grease	3	.01	1.00	.45
Phenolics (4AAP)	3	.00	.50	.17
Copper	3	.00	.20	.10
Total suspended solids	7	.00	.40	.08
Boron	3	.04	.12	.07
Chromium	3	.00	.10	.03
Total phosphorus	3	.00	.10	.03
Nitrate+Nitrite	3	.00	.00	.00

NOTE: (1) Difference Ratio = Absolute Value of the Difference in Concentration Divided by the Regulation Method Detection Limit

QA/QC Data for Washington Mills Electro-Minerals (Page 1 of 2)
CO 0100 - Queen Lagoon

TABLE C25.1 Detection Frequencies and Concentration Ratios for Found Parameters Monitored Daily, Thrice-Weekly or Weekly in Effluent

Parameter	Number of Observations	Class	Frequency of Detection (%) >RMDL	>2RMDL	>5RMDL	Concentration Ratios (1) Minimum	Maximum	Average
DOC	49	FM	100	92	29	1.20	34.00	5.99
Aluminum	49	FM	94	86	33	.30	23.33	4.91
Total suspended solids	341	FL	48	15	1	.10	5.50	1.16
Oil and grease	49	IL	20	4	0	.96	2.50	1.06
Total phosphorus	49	IL	12	2	0	.13	3.20	.70
Zinc	49	IL	6	0	0	.10	1.70	.51
Chromium	49	NO	0	0	0	.10	.70	.22

TABLE C25.2 Detection Frequencies and Concentration Ratios For Found Parameters Monitored Monthly, Quarterly or Semi-Annually in Effluent

Parameter	Number of Observations	Class	Frequency of Detection (%) >RMDL	>2RMDL	>5RMDL	Concentration Ratios (1) Minimum	Maximum	Average
Chloride	2	FM	100	100	100	7.00	7.50	7.25
Strontium	12	FM	100	100	100	6.50	8.00	7.25
Sulphate	2	FM	100	100	50	4.60	5.00	4.80
Phenolics (4AAP)	12	FL	75	8	0	.50	3.00	1.17
TOC	30	IL	10	0	0	.26	1.58	.61
Copper	12	IM	8	8	0	.20	2.60	.61
Boron	12	NO	0	0	0	.40	.60	.48
Lead	12	NO	0	0	0	.33	.33	.33

TABLE C25.3 Detection Frequencies and Concentration Ratios for Found Parameters in Travelling Blanks

Parameter	Number of Observations	Frequency of Detection >RMDL (%)	Concentration Ratios (1) Minimum	Maximum	Average
Oil and grease	4	25	.96	1.50	1.10
Copper	4	50	.20	1.90	1.05
DOC	4	0	.64	.70	.68
Aluminum	4	25	.30	1.80	.68
Phenolics (4AAP)	4	25	.15	1.00	.66
Total phosphorus	4	0	.13	.69	.55
Zinc	4	0	.40	.40	.40
Lead	4	0	.33	.33	.33
Boron	4	0	.10	.10	.10
Chromium	4	0	.10	.10	.10
Strontium	4	0	.10	.10	.10
TOC	3	0	.10	.10	.10

NOTE: (1) Concentration Ratio = Concentration Divided by Regulation Method Detection Limit

TABLE C25.4 Absolute Value of the Difference Between Effluent Monitoring and Duplicate Sample Concentration Divided by the Regulation Method Detection Limit for Found Parameters

Parameter	Number of Observations	Difference Ratios (1) Minimum	Maximum	Average
Aluminum	4	.43	2.20	1.08
DOC	4	.20	.80	.40
Strontium	4	.00	.50	.38
Phenolics (4AAP)	4	.00	1.00	.25
Oil and grease	4	.00	.80	.23
Copper	4	.00	.60	.15
TOC	3	.00	.24	.10
Total suspended solids	12	.00	.20	.10
Zinc	4	.00	.20	.05
Boron	4	.00	.04	.03
Chromium	4	.00	.00	.00
Lead	4	.00	.00	.00
Total phosphorus	4	.00	.00	.00

NOTE: (1) Difference Ratio = Absolute Value of the Difference in Concentration Divided by the Regulation Method Detection Limit

QA/QC Data for Washington Mills (Page 1 of 2)
CO 0100 - Final Effluent

TABLE C26.1 Detection Frequencies and Concentration Ratios for Found Parameters Monitored Daily, Thrice-Weekly or Weekly in Effluent

Parameter	Number of Observations	Class	Frequency of Detection (%) >RMDL	>2RMDL	>5RMDL	Concentration Ratios (1) Minimum	Maximum	Average
Chloride	141	FH	100	100	100	22.00	1,450.00	1,114.90
Sulphate	141	FH	100	100	100	12.00	188.00	145.38
Total suspended solids	337	FM	97	85	41	.50	9.30	4.42
Oil and grease	47	FM	87	77	49	.96	59.00	6.13
DOC	48	FL	67	48	8	.70	36.00	4.21
Aluminum	48	FL	67	31	15	.30	10.67	2.26
TOC	46	IL	15	4	0	.10	4.80	.59
Total phosphorus	48	IL	15	2	0	.13	2.00	.66

TABLE C26.2 Detection Frequencies and Concentration Ratios For Found Parameters Monitored Monthly, Quarterly or Semi-Annually in Effluent

Parameter	Number of Observations	Class	Frequency of Detection (%) >RMDL	>2RMDL	>5RMDL	Concentration Ratios (1) Minimum	Maximum	Average
COD	2	FH	100	100	100	5.30	6.70	6.00
Strontium	12	FH	100	100	100	17.00	2,850.00	537.25
Ammonia plus Ammonium	2	FM	100	100	50	4.40	5.20	4.80
Total Kjeldahl Nitrogen	2	FM	100	100	50	3.20	5.60	4.40
Boron	12	FH	100	92	92	1.20	74.00	16.15
Sulphide	2	FL	100	50	50	1.00	12.00	6.50
Phenolics (4AAP)	2	FL	100	50	0	1.50	3.50	2.50
Zinc	12	NO	0	0	0	.20	.60	.37

TABLE C26.3 Detection Frequencies and Concentration Ratios for Found Parameters in Travelling Blanks

Parameter	Number of Observations	Frequency of Detection >RMDL (%)	Concentration Ratios (1) Minimum	Maximum	Average
Oil and grease	4	0	.96	.96	.96
DOC	4	0	.64	.70	.68
Aluminum	4	25	.30	1.67	.64
Total phosphorus	4	0	.13	.69	.55
Zinc	4	0	.40	.40	.40
Chloride	12	0	.15	.15	.15
Strontium	4	0	.10	.15	.11
Boron	4	0	.10	.10	.10
Sulphate	12	0	.10	.10	.10
TOC	3	0	.10	.10	.10

NOTE: (1) Concentration Ratio = Concentration Divided by Regulation Method Detection Limit

TABLE C26.4 Absolute Value of the Difference Between Effluent Monitoring and Duplicate Sample Concentration Divided by the Regulation Method Detection Limit for Found Parameters

Parameter	Number of Observations	Difference Ratios (1) Minimum	Maximum	Average
Strontium	4	.00	200.00	58.75
Chloride	12	.00	150.00	41.79
Sulphate	12	.00	20.00	5.53
Aluminum	4	.00	4.33	1.59
Oil and grease	4	.20	2.10	1.05
Boron	4	.00	2.00	.70
DOC	4	.00	.70	.33
Total suspended solids	12	.10	.30	.17
Zinc	4	.00	.20	.10
TOC	3	.00	.10	.05
Total phosphorus	4	.00	.10	.02

NOTE: (1) Difference Ratio = Absolute Value of the Difference in Concentration Divided by the Regulation Method Detection Limit

TABLE C27.1 Detection Frequencies and Concentration Ratios For Found Parameters Monitored Monthly, Quarterly or Semi-Annually in Effluent

Parameter	Number of Observations	Class	Frequency of Detection (%) >RMDL	>2RMDL	>5RMDL	Concentration Ratios (1) Minimum	Maximum	Average
DOC	12	FM	92	92	8	1.00	6.20	2.78
Oil and grease	12	FL	42	33	0	1.00	4.00	1.51
TOC	12	NO	0	0	0	.16	.55	.33
Total suspended solids	12	NO	0	0	0	.16	.70	.41

TABLE C27.2 Detection Frequencies and Concentration Ratios for Found Parameters in Travelling Blanks

Parameter	Number of Observations	Frequency of Detection >RMDL (%)	Concentration Ratios (1) Minimum	Maximum	Average
Oil and grease	2	0	1.00	1.00	1.00
DOC	2	0	.40	1.00	.70
Total suspended solids	2	0	.20	.60	.40
TOC	2	0	.10	.10	.10

NOTE: (1) Concentration Ratio = Concentration Divided by Regulation Method Detection Limit

TABLE C27.3 Absolute Value of the Difference Between Effluent Monitoring and Duplicate Sample Concentration Divided by the Regulation Method Detection Limit for Found Parameters

Parameter	Number of Observations	Difference Ratios (1) Minimum	Maximum	Average
Oil and grease	2	.00	2.00	1.00
DOC	2	.00	.40	.20
Total suspended solids	2	.00	.28	.14
TOC	2	.10	.14	.12

NOTE: (1) Difference Ratio = Absolute Value of the Difference in Concentration Divided by the Regulation Method Detection Limit

TABLE C27.4 Detection Frequencies and Concentration Ratios For Found Parameters Monitored Monthly, Quarterly or Semi-Annually in Effluent

Parameter	Number of Observations	Class	Frequency of Detection (%) >RMDL	>2RMDL	>5RMDL	Concentration Ratios (1) Minimum	Maximum	Average
DOC	12	FM	100	92	8	1.40	7.18	3.12
Oil and grease	12	FL	42	17	0	1.00	3.00	1.25
Total suspended solids	12	IL	8	0	0	.20	1.20	.48
TOC	11	NO	0	0	0	.18	.84	.38

TABLE C27.5 Detection Frequencies and Concentration Ratios for Found Parameters in Travelling Blanks

Parameter	Number of Observations	Frequency of Detection >RMDL (%)	Concentration Ratios (1) Minimum	Maximum	Average
DOC	2	50	1.00	1.18	1.09
Oil and grease	1	0	1.00	1.00	1.00
Total suspended solids	1	0	.20	.20	.20
TOC	2	0	.10	.12	.11

NOTE: (1) Concentration Ratio = Concentration Divided by Regulation Method Detection Limit

TABLE C27.6 Range of Recoveries and Ratio of Spiked Quantity to the Regulation Method Detection Limit for Found Parameters (1)

ATG	Parameter	Number of Observations	Recovery (2) (%) Minimum	Maximum	Average	SPIKE/RMDL (3)
5	DOC	1	105	105	105	10.0
5	TOC	1	105	105	105	1.0
25	Oil and grease	1	100	100	100	20.0

NOTE: (1) - Only those parameters for which travelling spikes were required are presented.

(2) - Recovery = Actual value divided by expected value X 100%

(3) - SPIKE/RMDL = Expected value of the spiked sample divided by Regulation Method Detection Limit

TABLE C27.7 Absolute Value of the Difference Between Effluent Monitoring and Duplicate Sample Concentration Divided by the Regulation Method Detection Limit for Found Parameters

Parameter	Number of Observations	Difference Ratios (1) Minimum	Maximum	Average
DOC	1	1.00	1.00	1.00
Total suspended solids	1	.20	.20	.20
TOC	1	.08	.08	.08
Oil and grease	1	.00	.00	.00

NOTE: (1) Difference Ratio = Absolute Value of the Difference in Concentration Divided by the Regulation Method Detection Limit

TABLE C13.1 Detection Frequencies and Concentration Ratios for Found Parameters Monitored Daily, Thrice-Weekly or Weekly in Effluent

Parameter	Number of Observations	Class	Frequency of Detection (%) >RMDL	>2RMDL	>5RMDL	Concentration Ratios (1) Minimum	Maximum	Average
DOC	48	FH	79	79	65	1.00	74.00	11.57
TOC	48	FL	44	13	2	.10	9.00	1.18

TABLE C13.2 Detection Frequencies and Concentration Ratios For Found Parameters Monitored Monthly, Quarterly or Semi-Annually in Effluent

Parameter	Number of Observations	Class	Frequency of Detection (%) >RMDL	>2RMDL	>5RMDL	Concentration Ratios (1) Minimum	Maximum	Average
Strontium	12	FH	100	92	83	1.15	108.50	20.75
Aluminum	12	FL	92	50	0	.83	4.07	2.12
Oil and grease	11	FL	55	45	9	.60	10.80	2.52
Boron	12	FL	50	25	0	.26	4.50	1.44
Zinc	12	FL	42	17	8	.30	5.90	1.45

TABLE C13.3 Detection Frequencies and Concentration Ratios for Found Parameters in Travelling Blanks

Parameter	Number of Observations	Frequency of Detection >RMDL (%)	Concentration Ratios (1) Minimum	Maximum	Average
Aluminum	5	60	.83	2.13	1.23
DOC	5	0	1.00	1.00	1.00
Oil and grease	5	40	1.00	1.00	1.00
Zinc	5	20	.30	3.40	.94
Boron	5	20	.10	1.06	.63
Strontium	5	0	.15	.15	.15
TOC	5	0	.10	.10	.10

NOTE: (1) Concentration Ratio = Concentration Divided by Regulation Method Detection Limit

TABLE C13.4 Absolute Value of the Difference Between Effluent Monitoring and Duplicate Sample Concentration Divided by the Regulation Method Detection Limit for Found Parameters

Parameter	Number of Observations	Difference Ratios (1) Minimum	Maximum	Average
DOC	4	.00	8.00	2.50
Strontium	5	.00	5.75	2.05
Zinc	5	.10	6.30	1.86
Oil and grease	4	.00	5.20	1.40
Aluminum	5	.03	2.67	.85
Boron	5	.02	1.04	.28
TOC	4	.00	.60	.22

TABLE C13.5 Absolute Value of the Difference Between Effluent Monitoring and Split Sample Concentration Divided by the Regulation Method Detection Limit for Found Parameters

Parameter	Number of Observations	Difference Ratios (1) Minimum	Maximum	Average
Oil and grease	1	.40	.40	.40
DOC	1	.00	.00	.00
TOC	1	.00	.00	.00

NOTE: (1) Difference Ratio = Absolute Value of the Difference in Concentration Divided by the Regulation Method Detection Limit

TABLE C14.1 Detection Frequencies and Concentration Ratios for Found Parameters Monitored Daily, Thrice-Weekly or Weekly in Effluent

Parameter	Number of Observations	Class	Frequency of Detection (%) >RMDL	>2RMDL	>5RMDL	Concentration Ratios (1) Minimum	Maximum	Average
DOC	51	FM	69	65	49	1.00	90.00	16.03
Oil and grease	50	FM	60	56	22	.50	12.20	2.88
TOC	51	FL	55	45	4	.10	10.20	1.85

TABLE C14.2 Detection Frequencies and Concentration Ratios For Found Parameters Monitored Monthly, Quarterly or Semi-Annually in Effluent

Parameter	Number of Observations	Class	Frequency of Detection (%) >RMDL	>2RMDL	>5RMDL	Concentration Ratios (1) Minimum	Maximum	Average
Strontium	12	FH	100	100	100	5.00	129.00	82.08
Boron	12	FM	83	83	25	.32	5.60	3.90
Zinc	12	FH	83	67	58	.30	44.80	8.67
Aluminum	12	FL	50	33	17	.83	16.23	2.93

TABLE C14.3 Detection Frequencies and Concentration Ratios for Found Parameters in Travelling Blanks

Parameter	Number of Observations	Frequency of Detection >RMDL (%)	Concentration Ratios (1) Minimum	Maximum	Average
DOC	5	20	1.00	2.00	1.20
Oil and grease	5	40	.50	2.40	1.14
Aluminum	5	40	.83	1.80	1.12
Boron	5	20	.10	1.30	.77
Zinc	5	20	.30	2.30	.72
TOC	5	20	.10	2.80	.64
Strontium	5	0	.15	.15	.15

NOTE: (1) Concentration Ratio = Concentration Divided by Regulation Method Detection Limit

TABLE C14.4 Absolute Value of the Difference Between Effluent Monitoring and Duplicate Sample Concentration Divided by the Regulation Method Detection Limit for Found Parameters

Parameter	Number of Observations	Difference Ratios (1) Minimum	Maximum	Average
Strontium	4	.50	76.35	19.71
DOC	5	.00	32.00	9.20
Aluminum	4	.00	8.57	2.40
Zinc	4	.00	5.50	1.95
TOC	5	.00	2.20	.72
Oil and grease	4	.00	1.20	.63
Boron	4	.02	1.30	.37

TABLE C14.5 Absolute Value of the Difference Between Effluent Monitoring and Split Sample Concentration Divided by the Regulation Method Detection Limit for Found Parameters

Parameter	Number of Observations	Difference Ratios (1) Minimum	Maximum	Average
Oil and grease	1	1.60	1.60	1.60
Strontium	1	.50	.50	.50
Zinc	1	.20	.20	.20
Aluminum	1	.17	.17	.17
Boron	1	.08	.08	.08

NOTE: (1) Difference Ratio = Absolute Value of the Difference in Concentration Divided by the Regulation Method Detection Limit

TABLE C18.1 Detection Frequencies and Concentration Ratios For Found Parameters Monitored Monthly, Quarterly or Semi-Annually in Effluent

Parameter	Number of Observations	Class	Frequency of Detection (%) >RMDL	>2RMDL	>5RMDL	Concentration Ratios (1) Minimum	Maximum	Average
Nitrate+Nitrite	11	FH	100	100	100	120.00	427.60	201.47
Total Kjeldahl Nitrogen	11	FH	100	100	100	54.20	173.80	117.27
DOC	12	FM	100	100	42	3.56	7.00	4.96
Ammonia plus Ammonium	11	FH	91	91	91	.88	324.00	212.81

NOTE: (1) Concentration Ratio = Concentration Divided by Regulation Method Detection Limit

TABLE C18.2 Absolute Value of the Difference Between Effluent Monitoring and Split Sample Concentration Divided by the Regulation Method Detection Limit for Found Parameters

Parameter	Number of Observations	Difference Ratios (1) Minimum	Maximum	Average
DOC	1	4.88	4.88	4.88
Nitrate+Nitrite	1	4.00	4.00	4.00
Ammonia plus Ammonium	1	.00	.00	.00
Total Kjeldahl Nitrogen	1	.00	.00	.00

NOTE: (1) Difference Ratio = Absolute Value of the Difference in Concentration Divided by the Regulation Method Detection Limit

TABLE C21.1 Detection Frequencies and Concentration Ratios for Found Parameters Monitored Daily, Thrice-Weekly or Weekly in Effluent

Parameter	Number of Observations	Class	Frequency of Detection (%) >RMDL	>2RMDL	>5RMDL	Concentration Ratios (1) Minimum	Maximum	Average
DOC	52	FH	100	100	100	5.00	39.60	19.68
Total phosphorus	52	FH	100	98	81	1.60	17.70	9.23
TOC	52	FH	98	75	0	.80	4.04	2.37
Total suspended solids	363	FL	75	32	2	.20	20.00	1.76
Oil and grease	52	FL	62	50	10	1.00	14.40	2.48

TABLE C21.2 Detection Frequencies and Concentration Ratios For Found Parameters Monitored Monthly, Quarterly or Semi-Annually in Effluent

Parameter	Number of Observations	Class	Frequency of Detection (%) >RMDL	>2RMDL	>5RMDL	Concentration Ratios (1) Minimum	Maximum	Average
Chloride	2	FH	100	100	100	32.85	40.50	36.68
Nitrate+Nitrite	2	FH	100	100	100	41.60	49.60	45.60
Sulphate	2	FH	100	100	100	18.00	24.00	21.00
Bromoform	2	FM	100	100	50	4.59	7.03	5.81
COD	2	FM	100	100	50	4.00	10.00	7.00
Methylene chloride	2	FM	100	100	50	2.69	6.92	4.81
Total Kjeldahl Nitrogen	2	FM	100	100	50	4.60	5.74	5.17
Arsenic	2	FM	100	100	0	3.20	3.40	3.30
Aluminum	12	FH	100	92	92	1.33	22.00	10.11
Strontium	12	FH	92	92	92	1.00	39.50	27.46
Zinc	12	FH	92	92	92	1.00	25.00	12.08
Copper	12	FH	92	92	58	1.00	6.00	4.58
Boron	12	FH	75	67	58	.40	55.60	14.92
Chromium	12	FL	50	8	0	1.00	3.50	1.33

TABLE C21.3 Detection Frequencies and Concentration Ratios for Found Parameters in Travelling Blanks

Parameter	Number of Observations	Frequency of Detection >RMDL (%)	Concentration Ratios (1) Minimum	Maximum	Average
Zinc	4	50	1.00	6.00	2.75
Aluminum	4	50	.33	8.33	2.50
DOC	4	25	.20	8.20	2.20
Chromium	4	0	1.00	1.00	1.00
Copper	4	0	1.00	1.00	1.00
Oil and grease	4	0	1.00	1.00	1.00
Strontium	4	0	1.00	1.00	1.00
Boron	4	0	.40	.40	.40
TOC	4	0	.10	.82	.30
Total phosphorus	4	0	.10	.50	.22

NOTE: (1) Concentration Ratio = Concentration Divided by Regulation Method Detection Limit

TABLE C21.4 Absolute Value of the Difference Between Effluent Monitoring and Duplicate Sample Concentration Divided by the Regulation Method Detection Limit for Found Parameters

Parameter	Number of Observations	Difference Ratios (1) Minimum	Maximum	Average
Aluminum	4	.00	7.33	3.17
Strontium	4	.50	4.00	1.88
DOC	4	.40	3.20	1.35
Boron	4	.00	4.60	1.30
Zinc	4	.00	4.00	1.25
Copper	4	.00	3.00	1.00
Total suspended solids	10	.00	2.00	.62
Oil and grease	4	.00	1.70	.48
Total phosphorus	4	.20	.50	.28
Chromium	4	.00	.50	.13
TOC	4	.04	.20	.12

TABLE C21.5 Absolute Value of the Difference Between Uncorrected Monitoring Sample Concentration and Corrected Monitoring Sample Concentration Divided by the Regulation Method Detection Limit for Found Parameters

Parameter	Number of Observations	Difference Ratios (1) Minimum	Maximum	Average
Methylene chloride	2	.15	1.54	.85
Bromoform	2	.00	.00	.00

NOTE: (1) Difference Ratio = Absolute Value of the Difference in Concentration Divided by the Regulation Method Detection Limit

TABLE C22.1 Detection Frequencies and Concentration Ratios for Found Parameters Monitored Daily, Thrice-Weekly or Weekly in Effluent

Parameter	Number of Observations	Class	Frequency of Detection (%) >RMDL	>2RMDL	>5RMDL	Concentration Ratios (1) Minimum	Maximum	Average
DOC	52	FH	100	100	100	5.40	37.80	21.11
Total phosphorus	52	FH	100	100	90	2.90	37.20	10.61
TOC	52	FM	98	69	2	.84	6.08	2.58
Oil and grease	51	FM	65	51	8	1.00	13.40	2.51
Total suspended solids	363	FL	59	28	9	.20	19.60	2.09

TABLE C22.2 Detection Frequencies and Concentration Ratios For Found Parameters Monitored Monthly, Quarterly or Semi-Annually in Effluent

Parameter	Number of Observations	Class	Frequency of Detection (%) >RMDL	>2RMDL	>5RMDL	Concentration Ratios (1) Minimum	Maximum	Average
Chloride	2	FH	100	100	100	30.50	35.95	33.23
Nitrate+Nitrite	2	FH	100	100	100	13.96	15.60	14.78
Octachlorodibenzo-p-dioxin	2	FH	100	100	100	19.33	19.67	19.50
Strontium	12	FH	100	100	100	17.50	32.50	24.46
Sulphate	2	FH	100	100	100	20.00	28.00	24.00
Total Kjeldahl Nitrogen	2	FH	100	100	100	7.76	7.90	7.83
Zinc	12	FH	100	100	100	16.00	93.00	45.42
Copper	12	FH	100	100	92	4.00	34.00	13.42
COD	2	FM	100	100	50	4.00	11.00	7.50
Total H7CDD	2	FM	100	100	50	2.23	5.67	3.95
Arsenic	2	FL	100	50	0	1.40	2.40	1.90
Ammonia plus Ammonium	2	FL	100	0	0	1.12	1.32	1.22
Aluminum	12	FH	92	92	83	.67	44.67	12.33
Boron	12	FH	75	75	58	.40	65.80	17.08

TABLE C22.3 Detection Frequencies and Concentration Ratios for Found Parameters in Travelling Blanks

Parameter	Number of Observations	Frequency of Detection >RMDL (%)	Concentration Ratios (1) Minimum	Maximum	Average
DOC	5	20	.20	26.60	5.72
Zinc	4	25	1.00	4.00	1.75
Total phosphorus	5	20	.10	7.90	1.72
Strontium	4	25	1.00	2.50	1.38
Copper	4	0	1.00	1.00	1.00
Oil and grease	4	0	1.00	1.00	1.00
TOC	5	20	.10	2.70	.64
Boron	4	0	.40	.40	.40
Aluminum	4	0	.33	.33	.33

NOTE: (1) Concentration Ratio = Concentration Divided by Regulation Method Detection Limit

TABLE C22.4 Absolute Value of the Difference Between Effluent Monitoring and Duplicate Sample Concentration Divided by the Regulation Method Detection Limit for Found Parameters

Parameter	Number of Observations	Difference Ratios (1) Minimum	Maximum	Average
Aluminum	4	.33	12.67	5.75
Copper	4	1.00	7.00	2.50
Zinc	4	.00	3.00	1.50
DOC	4	.60	2.00	1.25
Total suspended solids	11	.20	3.60	.85
Strontium	4	.00	1.50	.75
Boron	4	.00	1.60	.60
Total phosphorus	4	.20	.70	.43
Oil and grease	4	.00	1.00	.25
TOC	4	.06	.40	.19

NOTE: (1) Difference Ratio = Absolute Value of the Difference in Concentration Divided by the Regulation Method Detection Limit

TABLE C23.1 Detection Frequencies and Concentration Ratios for Found Parameters Monitored Daily, Thrice-Weekly or Weekly in Effluent

Parameter	Number of Observations	Class	Frequency of Detection (%) >RMDL	>2RMDL	>5RMDL	Concentration Ratios (1) Minimum	Maximum	Average
DOC	49	FH	100	98	84	1.80	42.80	19.09
Total suspended solids	306	FM	82	69	23	.20	65.60	3.86
Total phosphorus	49	FH	82	78	67	.10	31.80	10.71
TOC	49	FM	82	71	0	.34	4.60	2.62

TABLE C23.2 Detection Frequencies and Concentration Ratios For Found Parameters Monitored Monthly, Quarterly or Semi-Annually in Effluent

Parameter	Number of Observations	Class	Frequency of Detection (%) >RMDL	>2RMDL	>5RMDL	Concentration Ratios (1) Minimum	Maximum	Average
Chloride	2	FH	100	100	100	9.50	11.50	10.50
Octachlorodibenzo-p-dioxin	2	FH	100	100	100	90.00	2,066.67	1,078.33
Sulphate	2	FH	100	100	100	5.20	8.00	6.60
Total H7CDD	2	FH	100	100	100	11.33	333.33	172.33
Zinc	12	FH	100	100	92	2.00	28.00	16.58
Strontium	12	FH	100	100	75	2.00	10.00	7.21
COD	2	FM	100	100	50	2.20	6.00	4.10
Nitrate+Nitrite	2	FM	100	100	50	3.08	9.20	6.14
Volatile suspended solids	2	FM	100	100	0	2.80	4.07	3.44
Chloroform	2	FL	100	50	50	1.29	24.29	12.79
Methylene chloride	2	FL	100	50	0	1.23	2.31	1.77
Aluminum	12	FH	92	92	75	.33	65.33	13.42
Copper	12	FH	92	92	75	1.00	117.00	33.25
Boron	12	FM	83	58	50	.40	51.20	13.53
Oil and grease	12	FM	67	58	8	1.00	6.00	2.25

TABLE C23.3 Detection Frequencies and Concentration Ratios for Found Parameters in Travelling Blanks

Parameter	Number of Observations	Frequency of Detection >RMDL (%)	Concentration Ratios (1) Minimum	Maximum	Average
DOC	3	33	.20	10.00	3.47
Copper	3	0	1.00	1.00	1.00
Oil and grease	3	0	1.00	1.00	1.00
Zinc	3	0	1.00	1.00	1.00
Strontium	3	0	.75	1.00	.92
Aluminum	3	33	.33	1.33	.67
Boron	3	0	.40	.40	.40
TOC	3	33	.10	1.00	.40
Total phosphorus	3	0	.20	.30	.27

NOTE: (1) Concentration Ratio = Concentration Divided by Regulation Method Detection Limit

TABLE C23.4 Absolute Value of the Difference Between Effluent Monitoring and Duplicate Sample Concentration Divided by the Regulation Method Detection Limit for Found Parameters

Parameter	Number of Observations	Difference Ratios (1) Minimum	Maximum	Average
Aluminum	4	.33	11.67	4.17
Boron	4	.00	12.20	3.70
DOC	4	.20	5.40	2.75
Zinc	4	1.00	7.00	2.50
Copper	4	.00	6.00	2.25
Strontium	4	.00	2.50	.88
Total suspended solids	11	.00	2.20	.73
Total phosphorus	4	.20	1.20	.70
Oil and grease	4	.00	1.00	.40
TOC	4	.00	.68	.31

TABLE C23.5 Absolute Value of the Difference Between Uncorrected Monitoring Sample Concentration and Corrected Monitoring Sample Concentration Divided by the Regulation Method Detection Limit for Found Parameters

Parameter	Number of Observations	Difference Ratios (1) Minimum	Maximum	Average
Methylene chloride	2	.00	1.54	.77
Chloroform	2	.00	.14	.07

NOTE: (1) Difference Ratio = Absolute Value of the Difference in Concentration Divided by the Regulation Method Detection Limit

APPENDIX D

PROBLEMATICAL DATA ANALYSIS TABLES

Albright and Wilson Americas	D- 2
Allied Chemicals	D- 4
Cabot Canada	D-12
Columbian Chemicals	D-14
Cyanamid Canada (Niagara)	D-15
Cyanamid Canada (Welland)	D-17
ETI	D-21
Exolon-ESK	D-23
General Chemical	D-25
ICI (Cornwall)	D-31
ICI (Courtright)	D-45
IMC	D-50
Liquid Carbonic (Courtright)	D-61
Liquid Carbonic (Maitland)	D-63
Nitrochem	D-65
Norton	D-71
Partek	D-74
Puritan-Bennett	D-75
Stanchem	D-76
Sulco Chemicals	D-88
U.C./Linde (Moore Township)	D-52
U.C./Linde (Sarnia)	D-55
U.C./Linde (Sault Ste. Marie)	D-58
UCAR Welland	D-91
Washington Mills Electro-Minerals	D-96
Washington Mills	D-94
Welland Chemical	D-98

Copper (ATG 9): RMDL = 10 μg/L, 12 monitoring samples, IL, average = 0.58RMDL, maximum = 1.30RMDL.

Precision: 4 duplicate pairs were reported with an average difference of 0.18RMDL and a maximum difference of 0.50RMDL. Poor agreement was determined for 1 duplicate pair (monitoring = 13 μg/L, duplicate = 8 μg/L <RMDL).
Conclusion: Precision is acceptable.

Conclusion: Data are acceptable.

Mercury (ATG 12): RMDL = 0.1 μg/L, 52 monitoring samples, FL, average = 1.26RMDL, maximum = 7RMDL.

Precision: 4 duplicate pairs were reported with an average difference of 0.18RMDL and a maximum difference of 0.6RMDL. Poor agreement was determined for 1 duplicate pair (monitoring = 0.07 μg/L <RMDL, duplicate = 0.13 μg/L).
Conclusion: Precision is acceptable.

Conclusion: Data are acceptable.

TOC (ATG 5): RMDL = 5 mg/L, 52 monitoring samples, IM, average = 0.69RMDL, maximum = 6.20RMDL.

Travelling Blanks: 3 samples were reported with an average = 0.49RMDL and a maximum = 1.26RMDL. Minor field contamination for 1 sample. No other detections in the travelling blank samples were reported.
Conclusion: Field contamination is negligible.

Conclusion: Data are acceptable.

Total Phosphorus (ATG 6): RMDL = 0.1 mg/L, 364 monitoring samples, IL, average = 0.81RMDL, maximum = 26.68RMDL

Precision: 46 duplicate pairs were reported with an average difference of 0.13RMDL and a maximum difference of 0.9RMDL. Poor agreement was determined for only 1 duplicate pair.
Conclusion: Precision is acceptable.

Conclusion: Data are acceptable.

Total Suspended Solids: RMDL = 5 mg/L, 353 monitoring samples, IL, average = 0.91RMDL, maximum = 11.60 RMDL.

Precision: 18 duplicate pairs were reported with an average difference of 0.11RMDL and a maximum difference of 1.31RMDL. Poor agreement was determined for 1 duplicate pair (monitoring = 2.97 mg/L <DL, duplicate = 9.5 mg/L) and marginal agreement for another duplicate pair (monitoring = 7 mg/L, duplicate = 9.5 mg/L).
Conclusion: Precision is acceptable.

Conclusion: Data are acceptable.

1,2,3,5-Tetrachlorobenzene (ATG 23): RMDL = 10 ng/L, 12 monitoring samples, FM, average = 18.50RMDL, maximum = 50RMDL.

Travelling Spiked Blanks: 4 samples were reported with an average spike of 13.2RMDL. Recoveries ranged from 52 to 72% (average = 61%). Only 2 samples were slightly less than 60% (52 and 59%). The other 2 samples were also relatively low but acceptable (66 and 72%).
Conclusion: Possible under-estimates.

Conclusion: Data are equivocal.

1,2,4,5-Tetrachlorobenzene (ATG 23): RMDL = 10 ng/L, 12 monitoring samples, FM, average = 18.53RMDL, maximum = 50RMDL.

Travelling Spiked Blanks: 4 samples were reported with an average spike of 14.2RMDL. Recoveries ranged from 39 to 83% (average = 62%). Only 2 samples were less than 60% (39 and 55%). The other 2 samples were slightly higher than 60% but acceptable (72 and 83%).
Conclusion: Possible under-estimates.

Conclusion: Data are equivocal.

Aluminum (ATG 9): RMDL = 30 μg/L, 12 monitoring samples, FH, average = 16.17RMDL, maximum = 71.67RMDL.

Precision: 2 duplicate pairs were reported with an average difference of 0.33RMDL and a maximum difference of 0.67RMDL. All duplicate pairs were in good agreement. 2 split pairs were also reported with an average difference of 2.67RMDL and a maximum difference of 3.67RMDL.
Conclusion: Precision is acceptable.

Conclusion: Data are acceptable.

Ammonia plus Ammonium (ATG 4): RMDL = 0.25 mg/L, 12 monitoring samples, IL, average = 0.6RMDL, maximum = 1.32RMDL.

Precision: 2 duplicate pairs were reported with an average difference of 0.38RMDL and a maximum difference of 0.6RMDL. Both duplicate pairs were in good agreement.
Conclusion: Precision is acceptable.

Conclusion: Data are acceptable.

Bis(2-ethylhexyl)phthalate (ATG 19): RMDL = 2.2 μg/L, 4 monitoring samples, FM, average = 7.24RMDL, maximum = 20.45RMDL.

Monitoring Lab Corrections: 4 uncorrected samples were reported with an average difference of 7.30RMDL and a maximum difference of 24.55RMDL. Two samples had large corrections.
Conclusion: Laboratory contamination is significant.

Conclusion: Data are equivocal.

Cadmium (ATG 9): RMDL = 2 μg/L, 12 monitoring samples, FL, average = 4.92RMDL, maximum = 28RMDL.

Precision: 2 duplicate pairs were reported with an average difference of 4RMDL and a maximum difference of 5.5RMDL. Poor agreement was determined for both duplicate pairs.
Conclusion: Insufficient QA/QC information to assess precision.

Conclusion: Data are equivocal.

Carbon Tetrachloride (ATG 16): RMDL = 1.3 μg/L, 153 monitoring samples, FH, average = 558.20RMDL, maximum = 2646.15RMDL.

Precision: 11 duplicate pairs were reported with an average difference of 48.95RMDL and a maximum difference of 230.77RMDL. Marginal agreement was determined for 3 duplicate pairs but all pairs were subjected to analytical difficulties.
Conclusion: Precision is unclear since analytical difficulties were encountered.

Conclusion: Data are acceptable.

Chloroform (ATG 16): RMDL = 0.7 μg/L, 153 monitoring samples, FH, average = 6609RMDL, maximum = 171429RMDL.

Precision: 11 duplicate pairs were reported with an average difference of 423.38RMDL and a maximum difference of 2857.14RMDL. Poor agreement was determined for 1 duplicate pair but all pairs were subject to analytical difficulties.
Conclusion: Precision is unclear since analytical difficulties were encountered.

Monitoring Lab Corrections: 153 uncorrected samples were reported with an average difference of 17.04RMDL and a maximum difference of 3846.15RMDL. Some very large but erratic corrections were reported.
Conclusion: Laboratory contamination is significant.

Conclusion: Data are equivocal.

Chromium (ATG 9): RMDL = 20 μg/L, 12 monitoring samples, IM, average = 1.46RMDL, maximum = 3.50RMDL.

Precision: 2 duplicate pairs were reported with an average difference of 1.25RMDL and a maximum difference of 1.50RMDL. Poor agreement was determined for both duplicate pairs.
Conclusion: Insufficient QA/QC information to assess precision.

Conclusion: Data are equivocal.

Copper (ATG 9): RMDL = 10 μg/L, 12 monitoring samples, IL, average = 1.5RMDL, maximum = 6RMDL.

Travelling Blanks: 4 samples were reported with an average = 1.25RMDL, maximum = 2RMDL. One sample did not meet the RMDL (travelling blank = 20 μg/L <DL). No other detections in the travelling blank samples were reported.
Conclusion: Field contamination is negligible.

Conclusion: Data are acceptable.

DOC (ATG 5): RMDL = 0.5 mg/L, 155 monitoring samples, FH, average = 29.08RMDL, maximum = 678RMDL.

Precision: 3 duplicate pairs were reported with an average difference of 0.8RMDL and a maximum difference of 1.8RMDL. Marginal agreement was determined for only 1 duplicate pair (monitoring = 3.8 mg/L, duplicate = 2.9 mg/L). 9 split pairs were also reported with an average difference of 0.91RMDL and a maximum difference of 4RMDL. Marginal agreement was determined for only 1 split pair (monitoring = 1.4 mg/L, duplicate = 1.1 mg/L). The other split pairs were in good agreement.
Conclusion: Precision is acceptable.

Conclusion: Data are acceptable.

Hexachlorocyclopentadiene (ATG 23): RMDL = 10 ng/L, 12 monitoring samples, FM, average = 32.52RMDL, maximum = 100RMDL.

Travelling Spiked Blanks: 4 samples were reported with an average spike of 4.9RMDL. Recoveries ranged from 38 to 80% (average = 61%). Only 2 samples were less than 60% (38 and 57%). The other 2 samples were slightly greater than 60% but acceptable (64 and 80%).
Conclusion: Possible under-estimates.

Conclusion: Data are equivocal.

Hexachloroethane (ATG 23): RMDL = 10 ng/L, 12 monitoring samples, FH, average = 108.7RMDL, maximum = 330RMDL.

Travelling Spiked Blanks: 4 samples were reported with an average spike of 5.7RMDL. Recoveries ranged from 47 to 87% (average = 66%). Only 1 sample was less than 60%. The other 3 samples were slightly higher than 60% but acceptable (61, 70 and 87%).
Conclusion: Recoveries are acceptable.

Conclusion: Data are acceptable.

Methylene Chloride (ATG 16): RMDL = 1.3 μg/L, 153 monitoring samples, FH, average = 300.78RMDL, maximum = 10000RMDL.

Travelling Spiked Blanks: 11 samples were reported with an average spike of 1.7RMDL. Recoveries ranged from 7 to 1206% (average = 285%). 2 samples were less than 60% but 5 samples were greater than 140% suggesting possible over-estimates of the true presence in the effluent.
Conclusion: Possible over-estimates.

Precision: 11 duplicate pairs were reported with an average difference of 122.80RMDL and a maximum difference of 553.85RMDL. Most differences resulted from analytical difficulties.
Conclusion: Precision is unclear since analytical difficulties were encountered.

Monitoring Lab Corrections: 153 uncorrected samples were reported with an average difference of 173.73RMDL and a maximum difference of 3846.15RMDL. Most corrections were large but were subject to analytical difficulties.
Conclusion: Laboratory contamination is unclear since analytical difficulties were encountered.

Conclusion: Data are unsuitable.

Nickel (ATG 9): RMDL = 20 μg/L, 12 monitoring samples, IL, average = 1.33RMDL, maximum = 4.5RMDL.

Precision: 2 duplicate pairs were reported with an average difference of 0.25RMDL and a maximum difference of 0.5RMDL. Marginal agreement was determined for 1 duplicate pair (monitoring = 30 μg/L, duplicate = 40 μg/L). The other duplicate pair was in good agreement. 2 split pairs were also reported with an average difference of 0.75RMDL and a maximum difference of 1.5RMDL. Poor agreement was determined for 1 split pair (monitoring = 1050 μg/L, split = 490 μg/L). The other split pair was in good agreement.
Conclusion: Precision is acceptable.

Conclusion: Data are acceptable.

Octachlorostyrene (ATG 23): RMDL = 10 ng/L, 12 monitoring samples, FH, average = 9.28RMDL, maximum = 51.7RMDL.

Travelling Spiked Blanks: 4 samples were reported with an average spike of 4.8RMDL. Recoveries ranged from 44 to 109% (average = 74%). Only 1 sample was less than 60%.
Conclusion: Recoveries are acceptable.

Precision: 4 duplicate pairs were reported with an average difference of 12RMDL and a maximum difference of 46RMDL. Poor agreement was determined for 1 duplicate pair.
Conclusion: Precision is acceptable.

Conclusion: Data are acceptable.

Oil and Grease (ATG 25): RMDL = 1 mg/L, 52 monitoring samples, FL, average = 2.93RMDL, maximum = 16RMDL.

Travelling Blanks: 4 samples were reported with an average = 1.25RMDL, maximum = 2RMDL. Significant field contamination for 1 sample (travelling blank = 2 mg/L, monitoring = 2.5 mg/L). No other detects in the travelling blank samples were reported.
Conclusion: Field contamination is negligible.

Conclusion: Data are acceptable.

Phenolics (4AAP) (ATG 14): RMDL = 2 μg/L, 52 monitoring samples, FL, average = 2.99RMDL, maximum = 17.50RMDL.

Precision: 2 duplicate pairs were reported with an average difference of 3RMDL and a maximum difference of 6RMDL.
Conclusion: Insufficient QA/QC information to assess precision.

Conclusion: Data are acceptable.

Strontium (ATG 9): RMDL = 20 μg/L, 12 monitoring samples, FH, average = 30.33RMDL, maximum = 85RMDL.

Precision: 2 duplicate pairs were reported and in good agreement. 2 split pairs were also reported with poor agreement for 1 split pair.
Conclusion: Precision is acceptable.

Conclusion: Data are acceptable.

Toluene (ATG 17): RMDL = 0.5 μg/L, 155 monitoring samples, FH, average = 203.6RMDL, maximum = 5160RMDL.

Monitoring Lab Corrections: 155 uncorrected samples were reported with an average difference = 5.41RMDL and a maximum difference of 560RMDL. Most corrections were subject to analytical difficulties.
Conclusion: Laboratory contamination is unclear since analytical difficulties were encountered.

Conclusion: Data are acceptable.

Total H7CDD (ATG 24): RMDL = 30 pg/L, 12 monitoring samples, IL, average = 1.01RMDL, maximum = 2.87RMDL.

Travelling Blanks: 4 samples were reported with an average = 0.75RMDL, maximum = 1.33RMDL. Significant field contamination possible for 1 sample (travelling blank = <40 pg/L, monitoring = 38 pg/L).
Conclusion: Field contamination is negligible.

Conclusion: Data are acceptable.

Total O8CDF (ATG 24): RMDL = 30 pg/L, 12 monitoring samples, FH, average = 59.33RMDL, maximum = 326.67RMDL.

Precision: 4 duplicate pairs were reported with an average difference of 55.75RMDL and a maximum difference of 216.67RMDL. Poor agreement was determined for 1 duplicate pair.
Conclusion: Precision is acceptable.

Conclusion: Data are acceptable.

Total Phosphorus (ATG 6): RMDL = 0.1 mg/L, 12 monitoring samples, IL, average = 0.57RMDL, maximum = 1.80RMDL.

Travelling Blanks: 4 samples were reported with an average = 0.72RMDL, maximum = 2.50RMDL. One unusual result was noted where field contamination is higher than the monitoring result.
Conclusion: Field contamination is negligible.

Conclusion: Data are acceptable.

Zinc (ATG 9): RMDL = 10 μg/L, 52 monitoring samples, FM, average = 7.1RMDL, maximum = 107RMDL.

Travelling Blanks: 4 samples were reported with an average = 3RMDL, maximum = 8RMDL. One unusual result where field contamination is higher than the monitoring result and one other result has minor contamination.
Conclusion: Field contamination is negligible.

Precision: 2 duplicate pairs were reported with an average difference of 1.5RMDL and a maximum difference of 2RMDL. Poor agreement was determined for 1 duplicate pair. Two split pairs were reported with an average difference of 1.5RMDL and a maximum difference of 2RMDL with poor agreement for 1 split pair.
Conclusion: Precision is acceptable.

Conclusion: Data are acceptable.

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Chloride (ATG I1): RMDL = 2 mg/L, 158 monitoring samples, FH, average = 63.44RMDL, maximum = 215RMDL.

Precision: 3 duplicate pairs were reported with an average difference of 6.67RMDL and a maximum difference of 10RMDL. All duplicate pairs were in good agreement. The large differences were a result of large concentrations being measured. 9 split pairs were also reported with an average difference of 1.33RMDL and a maximum difference of 5RMDL. All split pairs were in good agreement. The large differences were a result of large concentrations being measured.
Conclusion: Precision is acceptable.

Conclusion: Data are acceptable.

Copper (ATG 9): RMDL = 10 μg/L, 12 monitoring samples, FM, average = 2.35RMDL, maximum = 4.8RMDL.

Travelling Blanks: 4 samples were reported with an average difference of 1.55RMDL and a maximum difference of 2.8RMDL. Two travelling blank samples contained significant contamination (28 and 21 μg/L). Monitoring results were 34 and 32 μg/L respectively. Possible field contamination.
Conclusion: Field contamination is significant.

Conclusion: Data are equivocal.

Cyanide Total (ATG 2): RMDL = 0.005 mg/L, 52 monitoring samples, IL, average = 0.8RMDL, maximum = 7.4RMDL.

Precision: 1 duplicate pair was reported with a difference of 0.6RMDL. Poor agreement was determined for the duplicate pair (monitoring = 0.006 mg/L, duplicate = 0.003 mg/L <RMDL). 3 split pairs were also reported with an average difference of 0 and a maximum difference of 0.20RMDL. All split pairs were below the RMDL.
Conclusion: Precision is acceptable.

Conclusion: Data are acceptable.

Oil and Grease: RMDL = 1 mg/L, 52 monitoring samples, FL, average = 1.36RMDL, maximum = 10 RMDL.

Precision: 2 duplicate and 2 split pairs were reported. Poor agreement was determined for the two duplicate pairs.
Conclusion: Precision is acceptable.

Conclusion: Data are acceptable.

Total Kjeldahl Nitrogen (ATG 4a): RMDL = 0.5 mg/L, 52 monitoring samples, FL, average = 1.02RMDL, maximum = 3.2RMDL.

Precision: 1 duplicate and 3 split pairs were reported. Poor agreement was determined for 2 split pairs.
Conclusion: Precision is acceptable.

Conclusion: Data are acceptable.

Total Suspended Solids (ATG 8): RMDL = 5 mg/L, 365 monitoring samples, IL, average = 0.98RMDL, maximum = 13RMDL.

Precision: 3 duplicate and 9 split pairs were reported. Poor agreement was determined for 2 split pairs.
Conclusion: Precision is acceptable.

Conclusion: Data are acceptable.

Zinc (ATG 9): RMDL = 10 μg/L, 158 monitoring samples, FM, average = 7.36RMDL, maximum = 51RMDL.

Precision: 3 duplicate pairs and 9 split pairs were reported. Poor agreement for one duplicate pair and marginal agreement for one split pair.
Conclusion: Precision is acceptable.

Conclusion: Data are acceptable.

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QA/QC data were not available.

Aluminum (ATG 9): RMDL = 30 μg/L, 5 monitoring samples, FH, average = 9.27RMDL, maximum = 14.67RMDL.

Precision: 1 duplicate pair was reported with a difference of 0.67RMDL. Good agreement for the duplicate pair. 1 split pair was also reported with a difference of 4RMDL. Marginal agreement was determined for the split pair (monitoring = 320 μg/L, split = 440 μg/L). Precision may be limited.
Conclusion: Insufficient QA/QC information to assess precision.

Conclusion: Data are equivocal.

DOC (ATG 5): RMDL = 0.5 mg/L, 19 monitoring samples, FH, average = 8.29RMDL, maximum = 30RMDL.

Precision: 1 duplicate pair was reported with a difference of 3.2RMDL. Good agreement was determined for the duplicate pair. Precision may be limited
Conclusion: Insufficient QA/QC information to assess precision.

Conclusion: Data are equivocal.

Total Kjeldahl Nitrogen (ATG 4): RMDL = 0.5 mg/L, 5 monitoring samples, FM, average = 1.97RMDL, maximum = 2.4RMDL.

Travelling Blanks: 2 samples were reported with an average = 0.87RMDL, maximum = 1.42RMDL. Slight field contamination for 1 sample (travelling blank = 0.71 mg/L, monitoring = 1.2 mg/L). No contamination was reported for the other travelling blank sample.
Conclusion: Insufficient QA/QC information to assess field contamination.

Conclusion: Data are equivocal.

Aluminum (ATG 9): RMDL=30 ug/L, 7 monitoring samples, FH, average = 6.71RMDL, maximum = 12.33RMDL.

Precision: 2 split samples were reported with an average difference of 1.83RMDL and a maximum difference of 2.67RMDL. Poor agreement was determined for 1 sample (monitoring = 240 ug/L, split = 160 ug/L) and marginal agreement was determined for the other split pair (monitoring = 150 ug/L, split = 120 ug/L). Precision may be limited.
Conclusion: Insufficient QA/QC information to assess precision but may be limited.

Conclusion: Data are equivocal.

DOC (ATG 5): RMDL=0.5 mg/L, 30 monitoring samples, FM, average = 4.72RMDL, maximum = 10RMDL.

Travelling Blanks: 2 samples were reported with an average of 1.22RMDL and a maximum of 1.8RMDL.
Conclusion: Insufficient QA/QC information to assess field contamination.

Conclusion: Data are acceptable.

Total Suspended Solids (ATG 8): RMDL = 5 mg/L, 217 monitoring samples, FM, average = 7.73RMDL, maximum = 440RMDL.

Precision: 6 split pairs were reported with an average difference of 0.94RMDL and a maximum difference of 3.8RMDL. Poor agreement was determined for 1 split pair.
Conclusion: Precision is acceptable.

Conclusion: Data are acceptable.

Aluminum (ATG 9): RMDL = 30 μg/L, 156 monitoring samples, FH, average = 26.26RMDL, maximum = 83.33RMDL.

Precision: 12 split pairs were reported with an average difference of 14.18RMDL and a maximum difference of 56.67RMDL.
Conclusion: Precision is acceptable.

Conclusion: Data are acceptable.

Copper (ATG 9): RMDL = 10 μg/L, 11 monitoring samples, IL, average = 0.62RMDL, maximum = 1.5RMDL.

Precision: 3 split pairs were reported with an average difference of 0.23RMDL and a maximum difference of 0.3RMDL.
Conclusion: Insufficient QA/QC information to assess precision.

Conclusion: Data are acceptable.

Cyanide Total (ATG 2): RMDL = 0.005 mg/L, 52 monitoring samples, FH, average = 19.4RMDL, maximum = 132.4RMDL.

Precision: 4 split pairs were reported with an average difference of 12.8RMDL and a maximum difference of 48.4RMDL.
Conclusion: Precision is acceptable.

Conclusion: Data are acceptable.

DOC (ATG 5): RMDL = 0.5 mg/L, 52 monitoring samples, FH, average = 31.28RMDL, maximum = 86RMDL.

Precision: 3 split pairs were reported with an average difference of 1.4RMDL and a maximum difference of 4RMDL. All split pairs were in good agreement. The large difference was a result of large concentrations being measured.
Conclusion: Precision is acceptable.

Conclusion: Data are acceptable.

Mercury (ATG 12): RMDL = 0.1 μg/L, 10 monitoring samples, IM, average = 1.76RMDL, maximum = 12RMDL.

Precision: 2 split pairs were reported with an average difference of 1.95RMDL and a maximum difference of 3.91RMDL. Poor agreement was determined for 1 split pair.
Conclusion: Insufficient QA/QC information to assess precision.

Conclusion: Data are equivocal.

Nitrate+Nitrite (ATG 4): RMDL = 0.25 mg/L, 364 monitoring samples, FH, average = 28.83RMDL, maximum = 160RMDL.

Precision: 12 split pairs were reported with an average difference of 1.33RMDL and a maximum difference of 4RMDL. All split pairs were in good agreement. The large differences were a result of large concentrations being measured.
Conclusion: Precision is acceptable.

Conclusion: Data are acceptable.

PCBT (ATG 27): RMDL = 0.1 μg/L, 12 monitoring samples, IM, average = 0.87RMDL, maximum = 5RMDL.

Travelling Spiked Blanks: 2 samples were reported with an average spike of 60RMDL. Recoveries were 104 and 233%. PCBT was detected when the recovery was 233% which suggests that there were analytical difficulties.
Conclusion: Insufficient QA/QC information to assess travelling spiked blank recoveries.

Precision: 4 split pairs were reported with an average difference of 1.13RMDL and a maximum difference of 4.5RMDL. Poor agreement was determined for 1 split pair.
Conclusion: Precision is acceptable.

Conclusion: Data are equivocal.

Selenium (ATG 10): RMDL = 5 μg/L, 10 monitoring samples, IL, average = 0.68RMDL, maximum = 0.8RMDL.

Precision: 2 split pairs were reported with an average difference of 0.4RMDL and a maximum difference of 0.8RMDL. Poor agreement was determined for 1 split pair.
Conclusion: Insufficient QA/QC information to assess precision.

Conclusion: Data are equivocal.

Toluene (ATG 17): RMDL = 0.5 μg/L, 12 monitoring samples, IH, average = 1.18RMDL, maximum = 5.4RMDL.

Monitoring Lab Corrections: 11 uncorrected samples were reported with an average difference of 4.13RMDL and a maximum difference of 10RMDL. 10 uncorrected samples were corrected to be non-detected for the monitoring results.
Conclusion: Laboratory contamination is significant.

Conclusion: Data are equivocal.

Total Kjeldahl Nitrogen (ATG 4): RMDL = 0.5 mg/L, 364 monitoring samples, FH, average = 58.12RMDL, maximum = 214.2RMDL.

Precision: 12 split pairs were reported with an average difference of 0.75RMDL and a maximum difference of 2.4RMDL. All split pairs were in good agreement. The large difference was a result of large concentrations being measured.
Conclusion: Precision is acceptable.

Conclusion: Data are acceptable.

Total Phosphorus (ATG 6): RMDL = 0.1 mg/L, 364 monitoring samples, FH, average = 8.46RMDL, maximum = 138RMDL.

Precision: 12 split pairs were reported with an average difference of 0.17RMDL and a maximum difference of 2RMDL. Marginal agreement was determined for only 1 split pair (monitoring = 0.7 mg/L, split = 0.5 mg/L). The other split pairs were in good agreement.
Conclusion: Precision is acceptable.

Conclusion: Data are acceptable.

Total Suspended Solids (ATG 8): RMDL = 5 mg/L, 364 monitoring samples, FM, average = 3.64RMDL, maximum = 77RMDL.

Precision: 12 split pairs were reported with an average difference of 0.65RMDL and a maximum difference of 3.2RMDL. Poor agreement was determined for only 1 split pair (monitoring = 28 mg/L, split = 12 mg/L). The other split pairs were in good agreement.
Conclusion: Precision is acceptable.

Conclusion: Data are acceptable.

Zinc (ATG 9): RMDL = 10 μg/L, 52 monitoring samples, FL, average = 1.43RMDL, maximum = 7.9RMDL.

Travelling Blanks: 3 samples were reported with an average = 2.33RMDL, maximum = 6.2RMDL. One unusual result where field contamination is higher than the monitoring result (travelling blank = 62 μg/L, monitoring = 46 μg/L).
Conclusion: Field contamination is negligible.

Conclusion: Data are acceptable.

Ammonia plus Ammonium (ATG 4): RMDL = 0.25 mg/L, 12 monitoring samples, FH, average = 16.65RMDL, maximum = 42.40RMDL.

Precision: 2 duplicate pairs were reported with an average difference of 3.73RMDL and a maximum difference of 4.60RMDL. Large differences resulted since two laboratories had done the analyses.
Conclusion: Precision is acceptable.

Conclusion: Data are acceptable.

Nitrate+Nitrite (ATG 4): RMDL = 0.25 mg/L, 12 monitoring samples, FH, average = 39.62RMDL, maximum = 212RMDL.

Precision: 2 duplicate pairs were reported with an average difference of 10.43RMDL and a maximum difference of 12.86RMDL. Large differences resulted since two laboratories had done the analyses.
Conclusion: Precision is acceptable.

Conclusion: Data are acceptable.

Oil and Grease (ATG 25): RMDL = 1 mg/L, 12 monitoring samples, FL, average = 1.49RMDL, maximum = 4.5RMDL.

Precision: 2 duplicate pairs were reported with an average difference of 0.77RMDL and a maximum difference of 1.54RMDL. Good agreement was determined for both duplicate pairs.
Conclusion: Precision is acceptable.

Conclusion: Data are acceptable.

Zinc (ATG 9): RMDL = 10 μg/L, 12 monitoring samples, FM, average = 3.68RMDL, maximum = 11RMDL.

Precision: 2 duplicate pairs were reported with an average difference of 2.45RMDL and a maximum difference of 4.8RMDL. Good agreement was determined for both duplicate pairs.
Conclusion: Precision is acceptable.

Conclusion: Data are acceptable.

Aluminum (ATG 9): RMDL = 30 μg/L, 52 monitoring samples, FH, average = 9.47RMDL, maximum = 24RMDL.

Precision: 4 split pairs were reported with an average difference of 1.92RMDL and a maximum difference of 2RMDL. Marginal agreement was determined for only 1 split pair (monitoring = 190 μg/L, split = 240 μg/L). The other split pairs were in good agreement. Conclusion: Precision is acceptable.

Conclusion: Data are acceptable.

Copper (ATG 9): RMDL = 10 μg/L, 13 monitoring samples, FL, average = 0.94RMDL, maximum = 3.2RMDL.

Precision: 4 split pairs were reported with an average difference of 0.4RMDL and a maximum difference of RMDL. Good agreement was determined for all pairs. Conclusion: Precision is acceptable.

Conclusion: Data are acceptable.

DOC (ATG 5): RMDL = 0.5 mg/L, 52 monitoring samples, FM, average = 6.60RMDL, maximum = 54RMDL.

Precision: 4 split pairs were reported with an average difference of 0.95RMDL and a maximum difference of 3RMDL. Poor agreement was determined for 1 split pair (monitoring = 3.3 mg/L, split = 1.8 mg/L). The other split pairs were in good agreement. Conclusion: Precision is acceptable.

Conclusion: Data are acceptable.

Strontium (ATG 9): RMDL = 20 μg/L, 12 monitoring samples, FH, average = 7.78RMDL, maximum = 9RMDL.

Precision: 1 duplicate pair was reported with a difference of 8.9RMDL. Poor agreement was determined for the duplicate pair but is probably due to a data entry error (monitoring = 180 μg/L, duplicate = 0.16 μg/L <RMDL/10).
Conclusion: Precision is acceptable with possible data entry problem acknowledged.

Conclusion: Data are acceptable.

Sulphide (ATG 15): RMDL = 20 μg/L, 2 monitoring samples, FM, average = 2.75RMDL, maximum = 3RMDL.

Precision: 1 split pair was reported with a difference of 2.9RMDL. Poor agreement was determined for the split pair but is probably due to a data entry error (monitoring = 60 μg/L, split = 0.06 μg/L <RMDL/10).
Conclusion: Precision is acceptable with possible data entry problem acknowledged.

Conclusion: Data are acceptable.

Total Suspended Solids (ATG 8): RMDL = 5 mg/L, 363 monitoring samples, FM, average = 3.8RMDL, maximum = 14.9RMDL.

Precision: 15 split pairs were reported with an average difference of 0.82RMDL and a maximum difference of 5.2RMDL. Poor agreement was determined for 2 split pairs and marginal agreement for 2 split pairs.
Conclusion: Precision is acceptable.

Conclusion: Data are acceptable.

1,1,2,2-Tetrachloroethane (ATG 16): RMDL = 4.3 μg/L, 12 monitoring samples, FL, average = 1.01RMDL, maximum = 1.16RMDL.

Travelling Spiked Blanks: 4 samples were reported with an average spike of 1.2RMDL. Recoveries ranged from 28 to 124% (average = 91%). Only 1 sample had less than 60% recovery.
Conclusion: Recoveries are acceptable.

Conclusion: Data are acceptable.

1,1,2-Trichloroethane (ATG 16): RMDL = 0.6 μg/L, 12 monitoring samples, FL, average = 2.15RMDL, maximum = 4.17RMDL.

Travelling Blanks: 4 samples were reported with an average = 1.29RMDL, maximum = 4.17RMDL. One sample had analytical difficulties ("<WE" remark-coded data). No other detects were reported.
Conclusion: Field contamination is negligible.

Conclusion: Data are acceptable.

Aluminum (ATG 9): RMDL = 30 μg/L, 12 monitoring samples, FH, average = 5.58RMDL, maximum = 11.33RMDL.

Travelling Blanks: 4 samples were reported with an average = 2RMDL, maximum = 5RMDL. One sample had analytical difficulties ("<WE" remark-coded data). No other field contamination was reported.
Conclusion: Field contamination is negligible.

Precision: 4 split pairs were reported with an average difference of 1.67RMDL and a maximum difference of 3.33RMDL. One sample had analytical difficulties ("<WE" remark-coded data). Poor agreement was determined for 2 split pairs.
Conclusion: Precision is limited.

Conclusion: Data are equivocal.

Ammonia plus Ammonium (ATG 4): RMDL = 0.25 mg/L, 156 monitoring samples, FH, average = 21.77RMDL, maximum = 210.8RMDL.

Precision: 12 split pairs were reported with an average difference of 1.33RMDL and a maximum difference of 6RMDL. Poor agreement was determined for 1 split pair (monitoring = 1.9 mg/L, duplicate = 3.4 mg/L). The other split pairs were in good agreement.
Conclusion: Precision is acceptable.

Conclusion: Data are acceptable.

Arsenic (ATG 10): RMDL = 5 μg/L, 12 monitoring samples, FM, average = 3.73RMDL, maximum = 11RMDL.

Precision: 4 split pairs were reported with an average difference of 1.35RMDL and a maximum difference of 1.8RMDL. Poor agreement was determined for 2 split pairs and marginal agreement for 1 split pair.
Conclusion: Precision is limited.

Conclusion: Data are equivocal.

Bromoform, Bromomethane, Chloromethane (ATG 16): RMDL = 3.7 μg/L, 12 monitoring samples for each parameter, FM, average = 2.34RMDL, maximum = 2.70RMDL. Data for the three parameters were the same.

Travelling Blanks: 4 samples were reported with an average = 1.08RMDL, maximum = 2.70RMDL. One sample had analytical difficulties ("<WE" remark-coded data). No other detects were reported.
Conclusion: Field contamination is negligible.

Conclusion: Data are acceptable.

Bromomethane (ATG 16): See Bromoform.

Chloride (ATG I1): RMDL = 2 mg/L, 156 monitoring samples, FH, average = 23969.39RMDL, maximum = 31750RMDL.

Precision: 12 split pairs were reported with an average difference of 1142.92RMDL and a maximum difference of 2300RMDL. All split pairs were in good agreement. The large differences were a result of large concentrations being measured.
Conclusion: Precision is acceptable.

Conclusion: Data are acceptable.

Chloromethane (ATG 16): See Bromoform.

Methylene Chloride (ATG 16): RMDL = 1.3 μg/L, 12 monitoring samples, FL, average = 2.21RMDL, maximum = 3.85RMDL.

Travelling Blanks: 4 samples were reported with an average = 1.25RMDL, maximum = 3.85RMDL. One sample had analytical difficulties ("<WE" remark-coded data). No other detects were reported.
Conclusion: Field contamination is negligible.

Travelling Spiked Blanks: 4 samples were reported with an average spike of 3.8RMDL. Recoveries ranged from 52 to 124% (average = 92%). Only 1 sample with less than 60% recovery.
Conclusion: Recoveries are acceptable.

Conclusion: Data are acceptable.

Oil and Grease (ATG 25): RMDL = 1 mg/L, 52 monitoring samples, IM, average = 1.4RMDL, maximum = 5RMDL.

Precision: 4 duplicate pairs were reported with an average difference of 0.75RMDL and a maximum difference of 2RMDL. Poor agreement was determined for 2 duplicate pairs.
Conclusion: Precision is acceptable.

Conclusion: Data are acceptable.

Phenolics (4AAP) (ATG 14): RMDL = 2 μg/L, 52 monitoring samples, FL, average = 1.27RMDL, maximum = 2.50RMDL.

Precision: 4 split pairs were reported with an average difference of 0.29RMDL and a maximum difference of 0.95RMDL. Marginal agreement was determined for 1 split pair (monitoring = 4.9 μg/L, split = 3 μg/L).
Conclusion: Precision is acceptable.

Conclusion: Data are acceptable.

Sulphate (ATG IC3): RMDL = 5 mg/L, 156 monitoring samples, FH, average = 232.72RMDL, maximum = 272RMDL.

Precision: 12 split pairs were reported with an average difference of 5.63RMDL and a maximum difference of 18RMDL. All split pairs were in good agreement. The large differences were a result of large concentrations being measured.
Conclusion: Precision is acceptable.

Conclusion: Data are acceptable.

Sulphide (ATG 15): RMDL = 20 μg/L, 52 monitoring samples, FL, average = 2.51RMDL, maximum = 26.2RMDL.

Precision: 4 duplicate pairs were reported with an average difference of 5.80RMDL and a maximum difference of 23RMDL. Poor agreement was determined for 1 duplicate pair (monitoring = 500 μg/L, duplicate = 40 μg/L). Other duplicate pairs were less than RMDL.
Conclusion: Precision is acceptable.

Conclusion: Data are acceptable.

Total Kjeldahl Nitrogen (ATG 4): RMDL = 0.5 mg/L, 156 monitoring samples, FH, average = 11.73RMDL, maximum = 21.4RMDL.

Precision: 12 split pairs were reported with an average difference of 1.3RMDL and a maximum difference of 3.4RMDL. Marginal agreement was determined for 1 split pair (monitoring = 7.7 mg/L, split = 6.0 mg/L). The other split pairs were in good agreement.
Conclusion: Precision is acceptable.

Conclusion: Data are acceptable.

Total Phosphorus (ATG 6): RMDL = 0.1 mg/L, 52 monitoring samples, FL, average = 2.37RMDL, maximum = 29.30RMDL.

Travelling Blanks: 4 samples were reported with an average = 2RMDL, maximum = 5RMDL. One sample had analytical difficulties ("<WE" remark-coded data). No other detects were reported.
Conclusion: Field contamination is negligible.

Conclusion: Data are acceptable.

Total Suspended Solids (ATG 8): RMDL = 5 mg/L, 365 monitoring samples, FH, average = 8.27RMDL, maximum = 68.2RMDL.

Precision: 12 split pairs were reported with an average difference of 2.18RMDL and a maximum difference of 6.8RMDL. Marginal agreement was determined for 3 split pairs.
Conclusion: Precision is acceptable.

Conclusion: Data are acceptable.

Note: TSS values may be lower than indicated due to metal carbonates slowly precipitating from samples during regular sampling and storage time before analysis. Grab samples which are analysed immediately for TSS show up to 50% reductions due to settling.

Trichlorofluoromethane (ATG 16): RMDL = 1 μg/L, 12 monitoring samples, FH, average = 13.54RMDL, maximum = 49.30RMDL.

Travelling Spiked Blanks: 4 samples were reported with an average spike of 5RMDL. Recoveries ranged from 38 to 172% (average = 122%). 1 sample has less than 60% recovery (38%) while 2 samples have greater than 140% recoveries (156%, 172%). Conclusion: Possible over-estimates.

Precision: 4 samples were reported with an average difference of 0.98RMDL and a maximum difference of 2.1RMDL. Differences negligible compared to the monitoring data. Conclusion: Precision is acceptable.

Conclusion: Data are acceptable.

1,2-Dichloroethane (ATG 16): RMDL = 0.8 μg/L, 12 monitoring samples, IL, average = 0.7RMDL, maximum = 1.03RMDL.

Precision: 3 duplicate pairs were reported with an average difference of 0.14RMDL and a maximum difference of 0.4RMDL. Large differences resulted since two laboratories had done the analyses.
Conclusion: Precision is acceptable.
Monitoring Lab Corrections: 12 uncorrected samples were reported with an average difference of 0.11RMDL and a maximum difference of 0.42RMDL. Large differences resulted since two laboratories had done the analyses. When matched correctly, it appeared that no corrections have been made.
Conclusion: Laboratory contamination is negligible.

Conclusion: Data are acceptable.

Aluminum (ATG 9): RMDL = 30 μg/L, 52 monitoring samples, FM, average = 4.90RMDL, maximum = 13RMDL.

Precision: 1 duplicate/8 split pairs were reported with an average split difference of 3.05RMDL and a maximum split difference of 6.67RMDL. Poor agreement was determined for the duplicate pair by Lab 1 (monitoring = 310 μg/L, duplicate = 1350 μg/L). Large difference for split pairs resulted since two laboratories had done the analysis. Most split pairs done by one laboratory were in good agreement.
Conclusion: Precision is acceptable.

Conclusion: Data are acceptable.

Beryllium (ATG 9): RMDL = 10 μg/L, 12 monitoring samples, NO, average = 0.27RMDL, maximum = 0.5RMDL.

Precision: 1 duplicate/1 split pairs were reported with a duplicate difference of 0 and a split difference of 1.04RMDL. Only difference resulted since two laboratories had done the analyses and one of the laboratories had not met the RMDL. The split pair was not detected.
Conclusion: Insufficient QA/QC information to assess precision.

Conclusion: Data are acceptable.

Boron (ATG 9): RMDL = 50 μg/L, 11 monitoring samples, FH, average = 10.75RMDL, maximum = 28RMDL.

Precision: 1 duplicate pair reported. Poor agreement was determined for the duplicate pair. Precision may be limited.
Conclusion: Insufficient QA/QC information to assess precision.

Conclusion: Data are acceptable.

Cadmium (ATG 9): RMDL = 2 μg/L, 52 monitoring samples, FM, average = 4.16RMDL, maximum = 26.50RMDL.

Travelling Blanks: 3 samples were reported with an average = 3.87RMDL, maximum = 4.50RMDL. One unusual result where field contamination is higher than the monitoring result (travelling blank = 9 μg/L <DL but greater than RMDL, monitoring = 0.2 μg/L <RMDL).
Conclusion: Field contamination is negligible.

Precision: 1 duplicate/8 split pairs were reported with an average split difference of 3.98RMDL and a maximum split difference of 5.30RMDL. Large differences resulted since two laboratories had done the analyses.
Conclusion: Precision is acceptable. Differences due to mismatch of laboratories.

Conclusion: Data are acceptable but the "findings" have been highlighted since a laboratory did not meet the RMDL.

Cobalt (ATG 9): RMDL = 20 μg/L, 12 monitoring samples, NO, average = 0.29RMDL, maximum = 0.45RMDL.

Precision: 1 duplicate/1 split pairs were reported with a duplicate difference of 0 and a split difference of 0.58RMDL. Both pairs were below the RMDL.
Conclusion: Insufficient QA/QC information to assess precision.

Conclusion: Data are acceptable.

Chloride (ATG I1): RMDL = 2 mg/L, 155 monitoring samples, FH, average = 524.49RMDL, maximum = 2612RMDL.

Precision: 13 split pairs were reported with an average difference of 17.22RMDL and a maximum difference of 125RMDL. Large differences were due to large concentrations. All split pairs were in good agreement.
Conclusion: Precision is acceptable.

Conclusion: Data are acceptable.

Chloroform (ATG 16): RMDL = 0.7 μg/L, 52 monitoring samples, FH, average = 15.07RMDL, maximum = 68.57RMDL.

Precision: 3 duplicate pairs were reported with an average difference of 6.48RMDL and a maximum difference of 8.14RMDL. Poor agreement was determined for 2 duplicate pairs and marginal agreement for the other duplicate pair resulted since two laboratories had done the analyses.
Conclusion: Insufficient QA/QC information to assess precision.

Monitoring Lab Corrections: 52 uncorrected samples were reported with an average difference of 0.23RMDL and a maximum difference of 4.29RMDL. Large differences resulted since two laboratories had one the analyses. Neither laboratory corrected the monitoring samples.
Conclusion: Laboratory contamination is negligible.

Conclusion: Data are acceptable.

Copper (ATG 9): RMDL = 10 μg/L, 155 monitoring samples, FL, average = 2.01RMDL, maximum = 14.4RMDL.

Travelling Blanks: 9 samples were reported with an average = 1.15RMDL, maximum = 1.2RMDL. Field contamination never detected but laboratory that did the analysis did not meet the RMDL.
Conclusion: Field contamination is negligible.

Precision: 1 duplicate/12 split pairs were reported with an average split difference of 3.13RMDL and a maximum split difference of 239.8RMDL. Poor agreement was determined for the duplicate pair by Lab 1 (monitoring = 18 μg/L, duplicate = 69 μg/L). Large difference for split pairs due to two laboratories doing the analysis. Most split pairs done by one laboratory were in good agreement.
Conclusion: Precision is acceptable.

Conclusion: Data are acceptable but has been highlighted since a laboratory did not meet the RMDL.

Dibromochloromethane (ATG 16): RMDL = 1.1 μg/L, 52 monitoring samples, IL, average = 0.83RMDL, maximum = 6.82RMDL.

Precision: 3 duplicate pairs were reported with an average difference of 3.38RMDL and a maximum difference of 6.09RMDL. Large differences resulted since two laboratories had done the analyses. Lab 1 detected dibromochloromethane while Lab 2 did not.
Conclusion: Precision is acceptable. Differences due to mismatch of laboratories.

Monitoring Lab Corrections: 52 uncorrected samples were reported with an average difference of 0.11RMDL and a maximum difference of 2.95RMDL. Large differences resulted since two laboratories had done the analyses. When matched correctly, it appeared that no corrections have been made.
Conclusion: Laboratory contamination is negligible.

Conclusion: Data are acceptable.

DOC (ATG 5): RMDL = 0.5 mg/L, 51 monitoring samples, FH, average = 7.77RMDL, maximum = 14.8RMDL.

Precision: 4 split pairs were reported with an average difference of 1.25RMDL and a maximum difference of 2.8RMDL. Marginal agreement was determined for 1 split pair (monitoring = 3.6 mg/L, split = 5 mg/L). The other split pairs were in good agreement.
Conclusion: Precision is acceptable.

Conclusion: Data are acceptable.

Lead (ATG 9): RMDL = 30 μg/L, 12 monitoring samples, IH, average = 1.57RMDL, maximum = 11.67RMDL.

Precision: 1 duplicate/1 split pairs were reported with a duplicate difference of 2RMDL and a split difference of 1.67RMDL. Large differences resulted since two laboratories had done the analyses.
Conclusion: Insufficient QA/QC information to assess precision.

Conclusion: Data are acceptable.

Mercury (ATG 12): RMDL = 0.1 μg/L, 365 monitoring samples, FH, average = 168.42RMDL, maximum = 6920RMDL.

Precision: 9 split pairs were reported with an average difference of 10.33RMDL and a maximum difference of 38RMDL. Poor agreement was determined for 1 split pair resulted since two laboratories had done the analyses (monitoring = 10.4 μg/L Lab 1, split = 6.6 μg/L Lab 2). Marginal agreement was determined for 1 split pair (monitoring = 12 μg/L, split = 9.5 μg/L).
Conclusion: Precision is acceptable.

Conclusion: Data are acceptable.

Methylene Chloride (ATG 16): RMDL = 1.3 μg/L, 12 monitoring samples, IM, average = 3.3RMDL, maximum = 31.54RMDL.

Precision: 3 duplicate pairs were reported with an average difference of 0.6RMDL and a maximum difference of 1.62RMDL. Poor agreement was determined for 1 duplicate pair resulted since two laboratories had done the analyses (monitoring = 2.9 μg/L Lab 1, duplicate = 0.8 μg/L <DL Lab 2). Other duplicate pairs were not detected.
Conclusion: Precision is acceptable.

Monitoring Lab Corrections: 12 uncorrected samples were reported with an average difference of 2.73RMDL and a maximum difference of 29.69RMDL. Large differences resulted since two laboratories had done the analyses. Lab 1 made a significant correction to 1 monitoring result (monitoring = 0.8 μg/L <DL, uncorrected = 2.9 μg/L). Lab 2 made a significant correction to 1 monitoring result (monitoring = 0.1 μg/L <RMDL/10, uncorrected = 1.9 μg/L).
Conclusion: Laboratory contamination is negligible.

Conclusion: Data are acceptable.

Molybdenum (ATG 9): RMDL = 20 μg/L, 12 monitoring samples, IM, average = 0.58RMDL, maximum = 2.95RMDL.

Precision: 1 duplicate/1 split pairs were reported with a duplicate difference of 1.75RMDL and a split difference of 1.35RMDL. Large differences resulted since two laboratories had done the analyses. Good agreement was determined between the laboratories for both samples.
Conclusion: Insufficient QA/QC information to assess precision.

Conclusion: Data are acceptable but has been highlighted since a laboratory did not meet the RMDL.

Nickel (ATG 9): RMDL = 20 μg/L, 12 monitoring samples, IL, average = 0.48RMDL, maximum = 1.35RMDL.

Precision: 1 duplicate/1 split pairs were reported with a duplicate difference of 3.65RMDL and a split difference of 0.9RMDL. Poor agreement was determined for the duplicate pair by Lab 1 (monitoring = 12 μg/L, duplicate = 85 μg/L). Large difference for the split pair resulted since different laboratories had done the analyses. Precision may be limited.
Conclusion: Insufficient QA/QC information to assess precision.

Conclusion: Data are acceptable.

Strontium (ATG 9): RMDL = 20 μg/L, 8 monitoring samples, FH, average = 162.19RMDL, maximum = 230RMDL.

Precision: 1 duplicate pairs, difference of 10RMDL. The duplicate pair was in good agreement. The large difference was a result of large monitoring and duplicate concentrations.
Conclusion: Insufficient QA/QC information to assess precision.

Conclusion: Data are acceptable.

Sulphate (ATG I3): RMDL = 5 mg/L, 155 monitoring samples, FH, average = 59.36RMDL, maximum = 167.2RMDL.

Precision: 12 split pairs were reported with an average difference of 2.38RMDL and a maximum difference of 10RMDL. Large differences was a result of large concentrations being measured. All split pairs were in good agreement.
Conclusion: Precision is acceptable.

Conclusion: Data are acceptable.

Sulphide (ATG 15): RMDL = 20 μg/L, 11 monitoring samples, FH, average = 10.75RMDL, maximum = 28RMDL.

Precision: 1 duplicate/2 split pairs were reported with an average split difference of 9.81RMDL and a maximum split difference of 13.5RMDL. Large differences resulted since two laboratories had done the analyses.
Conclusion: Precision is acceptable.

Conclusion: Data are acceptable.

Thallium (ATG 9): RMDL = 30 μg/L, 12 monitoring samples, IL, average = 0.74RMDL, maximum = 1.83RMDL.

Precision: 1 duplicate/1 split pairs were reported with a duplicate difference of 0 and a split difference of 0.2RMDL. Both pairs were in good agreement.
Conclusion: Insufficient QA/QC information to assess precision.

Conclusion: Data are acceptable.

TOC (ATG 5): RMDL = 5 mg/L, 36 monitoring samples, FL, average = 1.05RMDL, maximum = 4.62RMDL.

Precision: 3 split pairs were reported with an average difference of 0.31RMDL and a maximum difference of 0.42RMDL. Good agreement was determined for both split pairs.
Conclusion: Precision is acceptable.

Conclusion: Data are acceptable.

Total Phosphorus (ATG 6): RMDL = 0.1 mg/L, 52 monitoring samples, FL, average = 2RMDL, maximum = 5.88RMDL.

Precision: 4 split pairs were reported with an average difference of 0.3RMDL and a maximum difference of 0.59RMDL. Differences resulted since two laboratories had done the analyses. Poor agreement was determined between the two laboratories for 1 split pair (monitoring = 0.111 mg/L Lab 1, split = 0.17 mg/L Lab 2).
Conclusion: Precision is acceptable.

Conclusion: Data are acceptable.

Total Suspended Solids (ATG 8): RMDL = 5 mg/L, 362 monitoring samples, FM, average = 9.54RMDL, maximum = 89.8RMDL.

Precision: 10 split pairs were reported with an average difference of 3.7RMDL and a maximum difference of 18RMDL. Large differences resulted since two laboratories had done the analyses. Poor agreement was determined for 1 split pair and between the two laboratories for 2 split pairs and marginal agreement between the two laboratories for 2 split pairs.
Conclusion: Precision is acceptable.

Conclusion: Data are acceptable.

1,2,3-Trichlorobenzene (ATG 23): RMDL = 10 ng/L, 12 monitoring samples, FL, average = 2.36RMDL, maximum = 9.75RMDL.

Travelling Spiked Blanks: 4 samples were reported with an average spike of 11.5RMDL. Recoveries ranged from 79 to 162% (average = 117%). Only 1 sample has greater than 140% recovery.
Conclusion: Recoveries are acceptable.

Conclusion: Data are acceptable.

Cadmium (ATG 9): RMDL = 2 μg/L, 12 monitoring samples, IL, average = 0.59RMDL, maximum = RMDL.

Travelling Blanks: 3 samples were reported with an average = 2.50RMDL, maximum = 2.60RMDL. Lab 1 never detected cadmium in a travelling blank sample above the RMDL. Lab 2 did not meet the RMDL but never detected cadmium in a travelling blank sample.
Conclusion: Field contamination is negligible.

Conclusion: Data are acceptable but the "findings" have been highlighted since a laboratory did not meet the RMDL.

Chromium (ATG 9): RMDL = 20 μg/L, 12 monitoring samples, FL, average = 1.29RMDL, maximum = 2.50RMDL.

Precision: 3 duplicate pairs were reported with an average difference of 0.17RMDL and a maximum difference of 0.45RMDL. Good agreement for all duplicate pairs.
Conclusion: Precision is acceptable.

Conclusion: Data are acceptable.

Copper (ATG 9): RMDL = 10 μg/L, 12 monitoring samples, FL, average = 2.64RMDL, maximum = 7.50RMDL.

Precision: 3 duplicate pairs were reported with an average difference of 1.37RMDL and a maximum difference of 4.10RMDL. Poor agreement was determined for 1 duplicate pair (monitoring = 75 μg/L, duplicate = 34 μg/L).
Conclusion: Precision is acceptable.

Conclusion: Data are acceptable but has been highlighted since a laboratory did not meet the RMDL.

Hexachlorobenzene (ATG 23): RMDL = 10 ng/L, 12 monitoring samples, FH, average = 13.58RMDL, maximum = 32.1RMDL.

Travelling Spiked Blanks: 4 samples were reported with an average spike of 8RMDL. Recoveries ranged from 40 to 148% (average = 98%). Only 1 sample less than 60% and only 1 sample greater than 140%.
Conclusion: Recoveries are acceptable.

Conclusion: Data are acceptable.

Hexachlorobutadiene (ATG 23): RMDL = 10 ng/L, 12 monitoring samples, FH, average = 24.91RMDL, maximum = 60.2RMDL.

Travelling Spiked Blanks: 4 samples were reported with an average spike of 8RMDL. Recoveries ranged from 15 to 90% (average = 64%). Only 1 sample less than 60%.
Conclusion: Recoveries are acceptable.

Conclusion: Data are acceptable.

Hexachlorocyclopentadiene (ATG 23): RMDL = 10 ng/L, 12 monitoring samples, FL, average = 3.91RMDL, maximum = 17RMDL.

Travelling Spiked Blanks: 4 samples were reported with an average spike of 8RMDL. Recoveries ranged from 19 to 43% (average = 26%). All recoveries were less than 60% which suggests possible under-estimation.
Conclusion: Recoveries are poor.

Conclusion: Data are equivocal have been highlighted since a laboratory did not meet the RMDL.

Hexachloroethane (ATG 23): RMDL = 10 ng/L, 12 monitoring samples, FH, average = 94.86RMDL, maximum = 296RMDL.

Travelling Spiked Blanks: 4 samples were reported with an average spike of 8RMDL. Recoveries ranged from 21 to 112% (average = 80%). Only 1 sample was less than 60%.
Conclusion: Recoveries are acceptable.

Conclusion: Data are acceptable.

Lead (ATG 9): RMDL = 30 μg/L, 12 monitoring samples, FL, average = 5.62RMDL, maximum = 22.7RMDL.

Precision: 3 duplicate pairs were reported with an average difference of 6.30RMDL and a maximum difference of 18.67RMDL. Poor agreement was determined for 1 duplicate pair by Lab 2 (monitoring = 1010 μg/L, duplicate = 450 μg/L). Lab 1 provided all of the monitoring data.
Conclusion: Precision is acceptable.

Conclusion: Data are acceptable.

Nickel (ATG 9): RMDL = 20 μg/L, 12 monitoring samples, FL, average = 1.30RMDL, maximum = 3.65RMDL.

Precision: 3 duplicate pairs were reported with an average difference of 0.68RMDL and a maximum difference of 2RMDL. Poor agreement was determined for 1 duplicate pair (monitoring = 73 μg/L, duplicate = 33 μg/L).
Conclusion: Precision is acceptable.

Conclusion: Data are acceptable.

Octachlorostyrene (ATG 23): RMDL = 10 ng/L, 12 monitoring samples, FM, average = 5.62RMDL, maximum = 22.7RMDL.

Travelling Spiked Blanks: 4 samples were reported with an average spike of 8RMDL. Recoveries ranged from 33 to 139% (average = 91%). Only 1 sample was less than 60%.
Conclusion: Recoveries are acceptable.

Conclusion: Data are acceptable.

Oil and Grease (ATG 25): RMDL = 1 mg/L, 52 monitoring samples, FH, average = 9.15RMDL, maximum = 47.6RMDL.

Precision: 2 duplicate pairs were reported with an average difference of 29.6RMDL and a maximum difference of 55RMDL. Poor agreement was determined for 1 duplicate pair (monitoring = 1 mg/L <DL Lab 1, duplicate = 56 mg/L Lab 2) because two laboratories had done the analyses. Marginal agreement was determined for the other duplicate pair even though two laboratories had done the analyses (monitoring = 11 mg/L Lab 1, duplicate = 15.2 mg/L Lab 2).
Conclusion: Insufficient QA/QC information to assess precision.

Conclusion: Data are acceptable.

Pentachlorobenzene (ATG 23): RMDL = 10 ng/L, 12 monitoring samples, FH, average = 8.08RMDL, maximum = 24.5RMDL.

Travelling Spiked Blanks: 4 samples were reported with an average spike of 8RMDL. Recoveries ranged from 40 to 146% (average = 98%). Only 1 sample was less than 60% and only 1 sample was greater than 140%.
Conclusion: Recoveries are acceptable.

Conclusion: Data are acceptable.

Total O8CDF (ATG 24): RMDL = 30 pg/L, 12 monitoring samples, FH, average = 25.35RMDL, maximum = 123.33RMDL.

Travelling Spiked Blanks: 2 samples were reported with an average spike of 465RMDL. Recoveries ranged from 10 to 79% (average = 45%). Only 1 sample was less than 60%.
Conclusion: Insufficient QA/QC information to assess recoveries.

Conclusion: Data are acceptable.

Total T4CDD (ATG 24): RMDL = 20 pg/L, 12 monitoring samples, FL, average = 3.73RMDL, maximum = 26RMDL.

Precision: 3 duplicate pairs were reported with an average difference of 2.50RMDL and a maximum difference of 7.50RMDL. Poor agreement was determined for 1 duplicate pair (monitoring = 150 pg/L IM, duplicate = 300 pg/L IM).
Conclusion: Precision is acceptable.

Conclusion: Data are acceptable.

Vanadium (ATG 9): RMDL = 30 μg/L, 12 monitoring samples, FL, average = 2.26RMDL, maximum = 8.67RMDL.

Precision: 3 duplicate pairs were reported with an average difference of 1.37RMDL and a maximum difference of 3.43RMDL. Poor agreement was determined for 1 duplicate pair (monitoring = 129 μg/L, duplicate = 26 μg/L <RMDL).
Conclusion: Precision is acceptable.

Conclusion: Data are acceptable but has been highlighted since a laboratory did not meet the RMDL.

Zinc (ATG 9): RMDL = 10 μg/L, 154 monitoring samples, FH, average = 9.7RMDL, maximum = 78.3RMDL.

Precision: 3 duplicate pairs were reported with an average difference of 9.73RMDL and a maximum difference of 29RMDL. Poor agreement was determined for 1 duplicate pair by Lab 1(monitoring = 500 μg/L, duplicate = 210 μg/L). Lab 2 provided most of the monitoring data.
Conclusion: Precision is acceptable.

Conclusion: Data are acceptable.

Aluminum (ATG 9): RMDL = 30 μg/L, 52 monitoring samples, FH, average = 13.77RMDL, maximum = 48.33RMDL.

Precision: 1 split/7 duplicate pairs, average duplicate difference of 2.55RMDL, maximum duplicate difference of 8.33RMDL. Marginal agreement was determined for 1 duplicate pair (monitoring = 620 μg/L, duplicate = 480 μg/L). All other duplicate pairs and the split pair were in good agreement.
Conclusion: Precision is acceptable.

Conclusion: Data are acceptable.

Ammonia plus Ammonium (ATG 4): RMDL = 0.25 mg/L, 361 monitoring samples, FH, average = 104.44RMDL, maximum = 688RMDL.

Precision: 1 split/12 duplicate pairs, average duplicate difference of 5.48RMDL, maximum duplicate difference of 44.8RMDL. All duplicate pairs and the split pair were in good agreement. The large differences were a result of large concentrations being measured.
Conclusion: Precision is acceptable.

Conclusion: Data are acceptable.

Chloride (ATG I1): RMDL = 2 mg/L, 4 monitoring samples, FH, average = 12.85RMDL, maximum = 31.9RMDL.

Precision: 1 split/2 duplicate pairs, average duplicate difference of 0.25RMDL, maximum duplicate difference of 0.25RMDL. Poor agreement was determined for the split pair (monitoring = 18 mg/L, split = 10.1 mg/L). Both duplicate pairs were in good agreement.
Conclusion: Precision is acceptable.

Conclusion: Data are acceptable.

Chloromethane (ATG 16): RMDL = 3.7 μg/L, 4 monitoring samples, IL, average = 0.35RMDL, maximum = 1.08RMDL.

Monitoring Lab Corrections: 4 uncorrected samples were reported with an average difference of 0.12RMDL and a maximum difference of 0.47RMDL. Only 1 correction was reported but uncorrected result was below the RMDL.
Conclusion: Laboratory contamination is negligible.

Conclusion: Data are acceptable.

Copper (ATG 9): RMDL = 10 μg/L, 12 monitoring samples, FL, average = 0.94RMDL, maximum = 2.75RMDL.

Precision: 3 duplicate pairs were reported with an average difference of 0.65RMDL and a maximum difference of 1.59RMDL. Poor agreement was determined for 1 duplicate pair (monitoring = 27.5 μg/L, duplicate = 11.6 μg/L). All other duplicate pairs were below the RMDL.
Conclusion: Precision is acceptable

Conclusion: Data are acceptable

DOC (ATG 5): RMDL = 0.5 mg/L, 48 monitoring samples, FH, average = 21.72RMDL, maximum = 384RMDL.

Precision: 7 duplicate pairs were reported with an average difference of 0.83RMDL and a maximum difference of 1.8RMDL. Poor agreement was determined for 1 duplicate pair (monitoring = 2.4 mg/L, duplicate = 1.5 mg/L). All other duplicate pairs were in good agreement.
Conclusion: Precision is acceptable.

Conclusion: Data are acceptable.

Nitrate+Nitrite (ATG 4): RMDL = 0.25 mg/L, 361 monitoring samples, FH, average = 96.68RMDL, maximum = 926RMDL.

Precision: 1 split/12 duplicate pairs, average duplicate difference of 3.59RMDL, maximum duplicate difference of 16.22RMDL. All duplicate pairs and the split pair were in good agreement. The large difference ratios for the pairs resulted since two laboratories had done the analyses. Marginal agreement between the two laboratories.
Conclusion: Precision is acceptable.

Conclusion: Data are acceptable.

Phenolics (4AAP) (ATG 14): RMDL = 2 μg/L, 12 monitoring samples, FM, average = 3.27RMDL, maximum = 7.70RMDL.

Travelling Blanks: 5 samples were reported with an average = 2.16RMDL, maximum = 9.20RMDL. One unusual result where field contamination is higher than the monitoring result (travelling blank = 18.4 μg/L, monitoring = 4.8 μg/L). No other detects were reported.
Conclusion: Field contamination is negligible.

Precision: 3 duplicate pairs were reported with an average difference of 3.33RMDL and a maximum difference of 7.30RMDL. Poor agreement was determined on the same day that unusual field contamination resulted (monitoring = 4.8 μg/L, duplicate = 19.4 μg/L). Good agreement for the duplicate pairs (including 1 split pair).
Conclusion: Precision is acceptable.

Conclusion: Data are acceptable.

Strontium (ATG 9): RMDL = 20 μg/L, 12 monitoring samples, FH, average = 6.67RMDL, maximum = 11.5RMDL.

Precision: 1 split/3 duplicate pairs, average duplicate difference of 0.62RMDL, maximum duplicate difference of 1.5RMDL. All split and duplicate pairs were in good agreement.
Conclusion: Precision is acceptable.

Conclusion: Data are acceptable.

Sulphate (ATG I3): RMDL = 5 mg/L, 157 monitoring samples, FH, average = 7.04RMDL, maximum = 18.39RMDL.

Precision: 7 duplicate pairs were reported with an average difference of 1.07RMDL and a maximum difference of 9.01RMDL. Poor agreement was determined for one duplicate pair but is probably a data entry error (monitoring = 45.55 mg/L, duplicate = 0.357 mg/L <RMDL). All other duplicate pairs were in good agreement (including 1 split pair).
Conclusion: Precision is acceptable.

Conclusion: Data are acceptable.

TOC (ATG 5): RMDL = 5 mg/L, 52 monitoring samples, FL, average = 2.26RMDL, maximum = 39.40RMDL.

Precision: 7 duplicate pairs were reported with an average difference of 0.30RMDL and a maximum difference of 2.10RMDL. Marginal agreement was determined for 1 duplicate pair (monitoring = 16.5 mg/L, duplicate = 27.0 mg/L). Good agreement for all other duplicate pairs (including 1 split pair).
Conclusion: Precision is acceptable.

Conclusion: Data are acceptable.

Total Kjeldahl Nitrogen (ATG 4): RMDL = 0.5 mg/L, 361 monitoring samples, FH, average = 66.01RMDL, maximum = 421.76RMDL.

Precision: 13 duplicate pairs were reported with an average difference of 1.4RMDL and a maximum difference of 6.67RMDL. All duplicate pairs were in good agreement.
Conclusion: Precision is acceptable.

Conclusion: Data are acceptable.

Total Suspended Solids (ATG 8): RMDL = 5 mg/L, 361 monitoring samples, FM, average = 7.4RMDL, maximum = 63.6RMDL.

Precision: 1 split/10 duplicate pairs, average duplicate difference of 0.35RMDL, maximum duplicate difference of 0.8RMDL. Poor agreement was determined for the split pair (monitoring = 26 mg/L, split = 17 mg/L). All duplicate pairs were in good agreement. Conclusion: Precision is acceptable.

Conclusion: Data are acceptable.

Zinc (ATG 9): RMDL = 10 μg/L, 51 monitoring samples, FM, average = 41.31RMDL, maximum = 1540RMDL.

Precision: 6 duplicate pairs were reported with an average difference of 3.91RMDL and a maximum difference of 13RMDL. Poor agreement was determined for 2 duplicate pairs. Conclusion: Precision is acceptable.

Conclusion: Data are acceptable.

Aluminum (ATG 9): RMDL = 30 μg/L, 52 monitoring samples, FL, average = 2.3RMDL, maximum = 18.33RMDL.

Travelling Blanks: 4 samples were reported with an average = 1.39RMDL, maximum = 4.67RMDL. One unusual result where field contamination is higher than the monitoring result (travelling blank = 140 μg/L, monitoring = 16 μg/L).
Conclusion: Field contamination is negligible.

Precision: 3 split pairs were reported with an average difference of 1.07RMDL and a maximum difference of 2.07RMDL. Marginal agreement was determined for one split pair (monitoring = 58 μg/L, split = 100 μg/L).
Conclusion: Precision is acceptable.

Conclusion: Data are acceptable.

DOC (ATG 5): RMDL = 0.5 mg/L, 12 monitoring samples, FH, average = 15.2RMDL, maximum = 26RMDL.

Precision: 3 split pairs were reported with an average difference of RMDL and a maximum difference of 1.8RMDL. All split pairs were in good agreement.
Conclusion: Precision is acceptable.

Conclusion: Data are acceptable.

Strontium (ATG 9): RMDL = 20 μg/L, 12 monitoring samples, FL, average = 41.13RMDL, maximum = 60RMDL.

Precision: 1 duplicate pair was reported with a difference of 2RMDL. The duplicate pair is in good agreement.
Conclusion: Insufficient QA/QC information to assess precision.

Conclusion: Data are equivocal.

Sulphate (ATG I3): RMDL = 5 mg/L, 154 monitoring samples, FH, average = 338.21RMDL, maximum = 500RMDL.

Precision: 7 split pairs were reported with an average difference of 9.14RMDL and a maximum difference of 20RMDL. All split pairs were in good agreement. The large differences were a result of large concentrations being measured.
Conclusion: Precision is acceptable.

Conclusion: Data are acceptable.

Total Kjeldahl Nitrogen (ATG 4): RMDL = 0.5 mg/L, 52 monitoring samples, FM, average = 3.29RMDL, maximum = 18RMDL.

Travelling Blanks: 4 samples were reported with an average = 0.93RMDL, maximum = 2.44RMDL. Significant field contamination for 1 sample (travelling blank = 1.22 mg/L, monitoring = 1.5 mg/L). No other field contamination was reported.
Conclusion: Field contamination is negligible.

Conclusion: Data are acceptable.

Zinc (ATG 9): RMDL = 10 μg/L, 52 monitoring samples, IL, average = 1.02RMDL, maximum = 4.3RMDL.

Travelling Blanks: 4 samples were reported with an average = 0.9RMDL, maximum = 2.3RMDL. One unusual result where field contamination is higher than the monitoring result (travelling blank = 23 μg/L, monitoring = 4 μg/L $<$DL).
Conclusion: Field contamination is negligible.

Precision: 1 duplicate/3 split pairs were reported with an average split difference of 0.37RMDL and a maximum split difference of 0.7RMDL. Good agreement was determined for the duplicate pair. Poor agreement was determined for both split pairs.
Conclusion: Precision is acceptable.

Conclusion: Data are acceptable.

Aluminum (ATG 9): RMDL = 30 μg/L, 12 monitoring samples, FH, average = 10.11RMDL, maximum = 22RMDL.

Travelling Blanks: 4 samples were reported with an average = 2.5RMDL, maximum = 8.33RMDL. Significant field contamination was reported for 1 sample (travelling blank = 250 μg/L, monitoring = 300 μg/L). The other field contamination was reported at the RMDL.
Conclusion: Field contamination is negligible.

Precision: 4 duplicate pairs were reported with an average difference of 3.17RMDL and a maximum difference of 7.33RMDL. Poor agreement was determined for 2 duplicate pairs.
Conclusion: Precision is limited.

Conclusion: Data are equivocal.

Boron (ATG 9): RMDL = 50 μg/L, 12 monitoring samples, FH, average = 14.92RMDL, maximum = 55.6RMDL.

Precision: 4 duplicate pairs were reported with an average difference of 1.3RMDL and a maximum difference of 4.6RMDL. Marginal agreement was determined for only 1 duplicate pair (monitoring = 940 μg/L, duplicate = 710 μg/L). The other duplicate pairs were in good agreement.
Conclusion: Precision is acceptable.

Conclusion: Data are acceptable.

Copper (ATG 9): RMDL = 10 μg/L, 12 monitoring samples, FH, average = 4.58RMDL, maximum = 6RMDL.

Precision: 4 duplicate pairs were reported with an average difference of RMDL and a maximum difference of 3RMDL. Poor agreement was determined for only 1 duplicate pair (monitoring = 40 μg/L, duplicate = 10 μg/L <DL). The other duplicate pairs were in good agreement.
Conclusion: Precision is acceptable.

Conclusion: Data are acceptable.

DOC (ATG 5): RMDL = 0.5 mg/L, 52 monitoring samples, FH, average = 19.68RMDL, maximum = 39.6RMDL.

Travelling Blanks: 4 samples were reported with an average = 2.2RMDL, maximum = 8.2RMDL. Minor field contamination was reported for 1 sample (travelling blank = 4.1 mg/L, monitoring = 19.8 mg/L). No other field contamination was reported.
Conclusion: Field contamination is negligible.

Precision: 4 duplicate pairs were reported with an average difference of 1.35RMDL and a maximum difference of 3.2RMDL. All duplicate pairs were in good agreement. The large differences were a result of large concentrations being measured.
Conclusion: Precision is acceptable.

Conclusion: Data are acceptable.

Methylene Chloride (ATG 16): RMDL = 1.3 μg/L, 2 monitoring samples, FM, average = 4.81RMDL, maximum = 6.92RMDL.

Monitoring Lab Corrections: 2 samples were reported with an average difference of 0.85RMDL and a maximum difference of 1.54RMDL. One minor correction made to one sample.
Conclusion: Laboratory contamination is negligible.

Conclusion: Data are acceptable.

Oil and grease (ATG 25): RMDL = 1 mg/L, 52 monitoring samples, FL, average = 2.48RMDL, maximum = 14.4RMDL.

Precision: 4 duplicate pairs were reported with an average difference of 0.48RMDL and a maximum difference of 1.7RMDL. Poor agreement was determined for 1 duplicate pair (monitoring = 2.7 mg/L, duplicate = 1.0 mg/L <DL). The other duplicate pairs were in good agreement.
Conclusion: Precision is acceptable.

Conclusion: Data are acceptable.

Strontium (ATG 9): RMDL = 20 μg/L, 12 monitoring samples, FH, average = 27.46RMDL, maximum = 39.5RMDL.

Precision: 4 duplicate pairs were reported with an average difference of 1.88RMDL and a maximum difference of 4RMDL. All duplicate pairs were in good agreement. The large differences were a result of large concentrations being measured.
Conclusion: Precision is acceptable.

Conclusion: Data are acceptable.

Total Suspended Solids (ATG 8): RMDL = 5 mg/L, 363 monitoring samples, FL, average = 1.76RMDL, maximum = 20RMDL.

Precision: 10 duplicate pairs were reported with an average difference of 0.62RMDL and a maximum difference of 2RMDL. Marginal agreement was determined for 2 duplicate pairs and poor agreement for 1 duplicate pair.
Conclusion: Precision is acceptable.

Conclusion: Data are acceptable.

Zinc (ATG 9): RMDL = 10 μg/L, 12 monitoring samples, FH, average = 12.08RMDL, maximum = 25RMDL.

Travelling Blanks: 4 samples were reported with an average = 2.75RMDL, maximum = 6RMDL. Significant field contamination reported for 1 sample (travelling blank = 60 μg/L, monitoring = 100 μg/L). Minor contamination reported for another sample (travelling blank = 30 μg/L, monitoring = 190 μg/L). No other detects in the travelling blank samples were reported.
Conclusion: Field contamination is negligible.

Precision: 4 duplicate pairs were reported with an average difference of 1.25RMDL and a maximum difference of 4RMDL. Poor agreement was determined for 1 duplicate pair (monitoring = 50 μg/L, duplicate = 10 μg/L <DL). The other duplicate pairs were in good agreement.
Conclusion: Precision is acceptable.

Conclusion: Data are acceptable.

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Aluminum (ATG 9): RMDL = 30 μg/L, 12 monitoring samples, FH, average = 12.33RMDL, maximum = 44.67RMDL.

Precision: 4 duplicate pairs were reported with an average difference of 5.75RMDL and a maximum difference of 12.67RMDL. Poor agreement was determined for 1 duplicate pair and marginal agreement for 2 duplicate pairs.
Conclusion: Precision is acceptable.

Conclusion: Data are acceptable.

Boron (ATG 9): RMDL = 50 μg/L, 12 monitoring samples, FH, average = 17.08RMDL, maximum = 65.8RMDL.

Precision: 4 duplicate pairs were reported with an average difference of 0.6RMDL and a maximum difference of 1.6RMDL. Two duplicate pairs that were detected were in good agreement.
Conclusion: Precision is acceptable.

Conclusion: Data are acceptable.

Copper (ATG 9): RMDL = 10 μg/L, 12 monitoring samples, FH, average = 13.42RMDL, maximum = 34RMDL.

Precision: 4 duplicate pairs were reported with an average difference of 2.5RMDL and a maximum difference of 7RMDL. Marginal agreement reported for 1 duplicate pair (monitoring = 340 μg/L, duplicate = 270 μg/L). The other duplicate pairs were in good agreement.
Conclusion: Precision is acceptable.

Conclusion: Data are acceptable.

DOC (ATG 5): RMDL = 0.5 mg/L, 52 monitoring samples, FH, average = 21.11RMDL, maximum = 37.8RMDL.

Travelling Blanks: 5 samples were reported with an average = 5.72RMDL, maximum = 26.6RMDL. Only one sample with significant field contamination (travelling blank = 13.3 mg/L, monitoring = 14.1 mg/L).
Conclusion: Field contamination is negligible.

Conclusion: Data are acceptable.

Strontium (ATG 9): RMDL = 20 μg/L, 12 monitoring samples, FH, average = 24.46RMDL, maximum = 32.5RMDL.

Travelling Blanks: 4 samples were reported with an average = 1.38RMDL, maximum = 2.5RMDL. Minor field contamination was reported for 1 sample (travelling blank = 50 μg/L, monitoring = 350 mg/L). No other detects in the travelling blank samples were reported.
Conclusion: Field contamination is negligible.

Conclusion: Data are acceptable.

TOC (ATG 5): RMDL = 5 mg/L, 52 monitoring samples, FM, average = 2.57RMDL, maximum = 6.08RMDL.

Travelling Blanks: 5 samples were reported with an average = 0.64RMDL, maximum = 2.70RMDL. One sample with significant field contamination (same day as DOC, travelling blank = 13.5 mg/L, monitoring = 14.9 mg/L).
Conclusion: Field contamination is negligible.

Conclusion: Data are acceptable.

Total Phosphorus (ATG 9): RMDL = 0.1 mg/L, 52 monitoring samples, FH, average = 10.61RMDL, maximum = 37.2RMDL.

Travelling Blanks: 5 samples were reported with an average = 1.72RMDL, maximum = 7.9RMDL. One unusual result where field contamination is higher than the monitoring result (travelling blank = 0.79 mg/L, monitoring = 0.74 mg/L). No other detects in the travelling blank samples were reported.
Conclusion: Field contamination is negligible.

Conclusion: Data are acceptable.

Total Suspended Solids (ATG 8): RMDL = 5 mg/L, 363 monitoring samples, FL, average = 2.09RMDL, maximum = 19.6RMDL.

Precision: 11 duplicate pairs were reported with an average difference of 0.85RMDL and a maximum difference of 3.60RMDL.
Conclusion: Precision is acceptable.

Conclusion: Data are acceptable.

Zinc (ATG 9): RMDL = 10 μg/L, 12 monitoring samples, FH, average = 45.52RMDL, maximum = 93RMDL.

Travelling Blanks: 4 samples were reported with an average = 1.75RMDL, maximum = 4RMDL. Minor field contamination was reported for 1 sample (travelling blank = 40 μg/L, monitoring = 560 μg/L). No other field contamination was reported.
Conclusion: Field contamination is negligible.

Precision: 4 duplicate pairs were reported with an average difference of 1.5RMDL and a maximum difference of 3RMDL. Good agreement was concluded for the duplicate pairs.
Conclusion: Precision is acceptable.

Conclusion: Data are acceptable.

Aluminum (ATG 9): RMDL = 30 μg/L, 12 monitoring samples, FH, average = 13.42RMDL, maximum = 65.33RMDL.

Precision: 4 duplicate pairs were reported with an average difference of 4.17RMDL and a maximum difference of 11.67RMDL. Marginal agreement was determined for 2 duplicate pairs.
Conclusion: Precision is acceptable.

Conclusion: Data are acceptable.

Boron (ATG 9): RMDL = 50 μg/L, 12 monitoring samples, FM, average = 13.53RMDL, maximum = 51.2RMDL.

Precision: 4 duplicate pairs were reported with an average difference of 3.7RMDL and a maximum difference of 12.2RMDL. Poor agreement was determined for 1 duplicate pairs.
Conclusion: Precision is acceptable.

Conclusion: Data are acceptable.

Copper (ATG 9): RMDL = 10 μg/L, 12 monitoring samples, FH, average = 33.25RMDL, maximum = 117RMDL.

Precision: 4 duplicate pairs were reported with an average difference of 2.25RMDL and a maximum difference of 6RMDL. All duplicate pairs were in good agreement.
Conclusion: Precision is acceptable.

Conclusion: Data are acceptable.

DOC (ATG 5): RMDL = 0.5 mg/L, 49 monitoring samples, FH, average = 19.09RMDL, maximum = 42.8RMDL.

Travelling Blanks: 3 samples were reported with an average = 3.47RMDL, maximum = 10RMDL. Minor field contamination was reported for 1 sample (travelling blank = 5 mg/L, monitoring = 13.6 mg/L). No other field contamination was reported.
Conclusion: Field contamination is negligible.

Precision: 4 duplicate pairs were reported with an average difference of 2.75RMDL and a maximum difference of 5.4RMDL. Marginal agreement was determined for 1 duplicate pair (monitoring = 4.0 mg/L, duplicate = 5.8 mg/L). The other duplicate pairs were in good agreement.
Conclusion: Precision is acceptable.

Conclusion: Data are acceptable.

Methylene Chloride (ATG 16): RMDL = 1.3 μg/L, 2 monitoring samples, FL, average = 1.77RMDL, maximum = 2.31RMDL.

Monitoring Lab Corrections: 2 uncorrected samples were reported with an average = 0.77RMDL, maximum = 1.54RMDL. Corrections were insignificant compared to the monitoring results.
Conclusion: Laboratory contamination is negligible.

Conclusion: Data are acceptable.

Strontium (ATG 9): RMDL = 20 μg/L, 12 monitoring samples, FH, average = 7.21RMDL, maximum = 10RMDL.

Precision: 4 duplicate pairs were reported with an average difference of 0.88RMDL and a maximum difference of 2.5RMDL. Marginal agreement was determined for only 1 duplicate pair (monitoring = 190 μg/L, duplicate = 240 μg/L). The other duplicate pairs were in good agreement.
Conclusion: Precision is acceptable.

Conclusion: Data are acceptable.

Total Suspended Solids (ATG 8): RMDL = 5 mg/L, 306 monitoring samples, FM, average = 3.86RMDL, maximum = 65.6RMDL.

Precision: 11 duplicate pairs were reported with an average difference of 0.73RMDL and a maximum difference of 2.2RMDL.
Conclusion: Precision is acceptable.

Conclusion: Data are acceptable.

Zinc (ATG 9): RMDL = 10 μg/L, 12 monitoring samples, FH, average = 16.58RMDL, maximum = 28RMDL.

Precision: 4 duplicate pairs were reported with an average difference of 2.5RMDL and a maximum difference of 7RMDL. Marginal agreement was determined for only 1 sample (monitoring = 170 mg/L, duplicate = 240 μg/L). The other duplicate pairs were in good agreement.
Conclusion: Precision is acceptable.

Conclusion: Data are acceptable.

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Aluminum (ATG 9): RMDL = 30 μg/L, 12 monitoring samples, FL, average = 2.12RMDL, maximum = 4.70RMDL.

Travelling Blanks: 5 samples were reported with an average = 1.23RMDL, maximum = 2.13RMDL. One unusual result where field contamination is higher than the monitoring result (travelling blank = 64 μg/L, monitoring = 25 μg/L <DL). Possible field contamination for one sample (travelling blank = 40 μg/L, monitoring = 70 μg/L).
Conclusion: Field contamination is negligible.

Precision: 5 duplicate pairs were reported with an average difference of 0.85RMDL and a maximum difference of 2.67RMDL. Poor agreement was determined for 1 duplicate pairs.
Conclusion: Precision is acceptable.

Conclusion: Data are acceptable.

Boron (ATG 9): RMDL = 50 μg/L, 12 monitoring samples, FL, average = 1.44RMDL, maximum = 4.5RMDL.

Precision: 5 duplicate pairs were reported with an average difference of 0.28RMDL and a maximum difference of 1.04RMDL. Poor agreement was determined for 1 duplicate pairs.
Conclusion: Precision is acceptable.

Conclusion: Data are acceptable.

DOC (ATG 5): RMDL = 0.5 mg/L, 48 monitoring samples, FH, average = 11.57RMDL, maximum = 74RMDL.

Precision: 4 duplicate pairs were reported with an average difference of 2.5RMDL and a maximum difference of 8RMDL. Poor agreement was determined for only 1 duplicate pair (monitoring = 3 mg/L, duplicate = 7 mg/L). The other duplicate pairs were in good agreement.
Conclusion: Precision is acceptable.

Conclusion: Data are acceptable.

Oil and Grease (ATG 25): RMDL = 1 mg/L, 12 monitoring samples, FL, average = 2.52RMDL, maximum = 10.80RMDL.

Precision: 4 duplicate pairs were reported with an average difference of 1.40RMDL and a maximum difference of 5.20RMDL. Poor agreement was determined for one duplicate pair (monitoring = 3 mg/L, duplicate = 8.2 mg/L).
Conclusion: Precision is acceptable.

Conclusion: Data are acceptable.

Strontium (ATG 9): RMDL = 20 μg/L, 12 monitoring samples, FH, average = 20.75RMDL, maximum = 108.5RMDL.

Precision: 5 duplicate pairs were reported with an average difference of 2.05RMDL and a maximum difference of 5.75RMDL. Poor agreement was determined for 2 duplicate pairs.
Conclusion: Precision is acceptable.

Conclusion: Data are acceptable.

Zinc (ATG 9): RMDL = 10 μg/L, 12 monitoring samples, FL, average = 1.45RMDL, maximum = 5.90RMDL.

Travelling Blanks: 5 samples were reported with an average = 0.94RMDL, maximum = 3.40RMDL. One unusual result where field contamination is higher than the monitoring result (travelling blank = 34 μg/L, monitoring = 8 μg/L <RMDL).
Conclusion: Field contamination is negligible.

Precision: 5 duplicate pairs were reported with an average difference of 1.86RMDL and a maximum difference of 6.3RMDL. Poor agreement was determined for 1 duplicate pairs.
Conclusion: Precision is acceptable.

Conclusion: Data are acceptable.

Aluminum (ATG 9): RMDL = 30 μg/L, 12 monitoring samples, FL, average = 2.93RMDL, maximum = 16.23RMDL.

Travelling blanks: 5 samples were reported with an average = 1.12RMDL, maximum = 1.80RMDL. One unusual result where field contamination is higher than the monitoring result but field contamination seems significant (travelling blank = 54 μg/L, monitoring = 51 μg/L).
Conclusion: Field contamination is acceptable.

Precision: 4 duplicate pairs were reported with an average difference of 2.4RMDL and a maximum difference of 8.57RMDL. Poor agreement was determined for 1 duplicate pair and marginal agreement for 1 duplicate pair.
Conclusion: Precision is acceptable.

Conclusion: Data are acceptable.

DOC (ATG 5): RMDL = 0.5 mg/L, 51 monitoring samples, FM, average = 16.03RMDL, maximum = 90RMDL.

Precision: 5 duplicate pairs were reported with an average difference of 9.2RMDL and a maximum difference of 32RMDL. Poor agreement was determined for 1 duplicate pair and marginal agreement for 1 duplicate pair.
Conclusion: Precision is acceptable.

Conclusion: Data are acceptable.

Oil and Grease (ATG 25): RMDL = 1 mg/L, 50 monitoring samples, FM, average = 2.88RMDL, maximum = 12.2RMDL.

Travelling blanks: 5 samples were reported with an average = 1.14RMDL, maximum = 2.40RMDL. Minor contamination for some samples.
Conclusion: Field contamination is acceptable.

Conclusion: Data are acceptable.

Strontium (ATG 9): RMDL = 20 μg/L, 12 monitoring samples, FH, average = 82.08RMDL, maximum = 129RMDL.

Precision: 4 duplicate pairs were reported with an average difference of 19.71RMDL and a maximum difference of 76.35RMDL. Poor agreement was determined for only 1 duplicate pair (monitoring = 1530 μg/L, duplicate = 3 μg/L <DL). The other duplicate pairs were in good agreement.
Conclusion: Precision is acceptable.

Conclusion: Data are acceptable.

TOC (ATG 5): RMDL = 5 mg/L, 51 monitoring samples, FL, average = 1.85RMDL, maximum = 10.20RMDL.

Precision: 5 duplicate pairs were reported with an average difference of 0.72RMDL and a maximum difference of 2.20RMDL. Poor agreement was determined for 1 duplicate pair (monitoring = 19 mg/L, duplicate = 8 mg/L).
Conclusion: Precision is acceptable.

Conclusion: Data are acceptable.

Zinc (ATG 9): RMDL = 10 μg/L, 12 monitoring samples, FH, average = 8.67RMDL, maximum = 44.8RMDL.

Travelling Blanks: 5 samples were reported with an average = 0.72RMDL, maximum = 2.3RMDL. Minor field contamination reported for 1 sample (travelling blank = 23 μg/L, monitoring = 106 μg/L). No other field contamination was reported.
Conclusion: Field contamination is negligible.

Precision: 4 duplicate pairs were reported with an average difference of 1.95RMDL and a maximum difference of 5.5RMDL. Poor agreement was determined for only 1 duplicate pair (monitoring = 106 μg/L, duplicate = 51 μg/L). The other duplicate pairs were in good agreement.
Conclusion: Precision is acceptable.

Conclusion: Data are acceptable.

1,1-Dichloroethylene (ATG 16): RMDL = 2.8 μg/L, 51 monitoring samples, IL, average = 0.67RMDL, maximum = 1.46RMDL.

Monitoring Lab Corrections: 51 uncorrected samples were reported with an average difference of 0.13RMDL and a maximum difference of 0.96RMDL.
Conclusion: Laboratory contamination is negligible.

Conclusion: Data are acceptable.

Ammonia plus Ammonium (ATG 4): RMDL = 0.25 mg/L, 363 monitoring samples, FH, average = 447.8RMDL, maximum = 1520RMDL.

Precision: 1 duplicate/10 split pairs with an average split difference of 30.8RMDL and a maximum split difference of 144RMDL. Poor agreement was determined for only 1 split pair (monitoring = 51 mg/L, split = 87 mg/L). All other split pairs and the duplicate pair were in good agreement. The large differences were a result of large concentrations being measured.
Conclusion: Precision is acceptable.

Conclusion: Data are acceptable.

Chloroform (ATG 16): RMDL = 0.7 μg/L, 51 monitoring samples, FM, average = 4.21RMDL, maximum = 17.14RMDL.

Monitoring Lab Corrections: 51 uncorrected samples were reported with an average difference of 1.63RMDL and a maximum difference of 8.71RMDL. Some large but erratic corrections were made during the monitoring year.
Conclusion: Laboratory contamination is significant.

Conclusion: Data are equivocal.

DOC (ATG 5): RMDL = 0.5 mg/L, 51 monitoring samples, FH, average = 65.07RMDL, maximum = 320RMDL.

Precision: 4 split pairs were reported with an average difference of 1.5RMDL and a maximum difference of 4RMDL. All split pairs were in good agreement.
Conclusion: Precision is acceptable.

Conclusion: Data are acceptable.

Nitrate+Nitrite (ATG 4): RMDL = 0.25 mg/L, 362 monitoring samples, FH, average = 369.94RMDL, maximum = 1720RMDL.

Precision: 1 duplicate/10 split pairs were reported with an average split difference of 28.8RMDL and a maximum split difference of 120RMDL. All split pairs and the duplicate pairs were in good agreement. The large differences were a result of large concentrations being measured.
Conclusion: Precision is acceptable.

Conclusion: Data are acceptable.

Oil and Grease (ATG 25): RMDL = 1 mg/L, 51 monitoring samples, FM, average = 20.41RMDL, maximum = 900.9RMDL.

Precision: 2 duplicate pairs were reported with an average difference of RMDL and a maximum difference of 1.7RMDL. Both duplicate pairs were in good agreement. 2 split pairs were also reported with an average difference of 1.5RMDL and a maximum difference of 2.2RMDL. Poor agreement was determined for 1 split pair (monitoring = 3.9 mg/L, split = 1.7 mg/L). The other split pair was in good agreement.
Conclusion: Precision is acceptable.

Conclusion: Data are acceptable.

Phenol (ATG 20): RMDL = 2.4 μg/L, 51 monitoring samples, FM, average = 5.76RMDL, maximum = 35.42RMDL.

Travelling Spiked Blanks: 3 samples were reported with an average spike of 8.3RMDL. Recoveries ranged from 9 to 29% (average = 22%).
Conclusion: Recoveries are poor.

Conclusion: Data are equivocal.

Phenolics (4AAP) (ATG 14): RMDL = 2 μg/L, 51 monitoring samples, FH, average = 42.76RMDL, maximum = 185RMDL.

Precision: 4 split pairs were reported with an average difference of 0.75RMDL and a maximum difference of 2RMDL. All split pairs were in good agreement.
Conclusion: Precision is acceptable.

Conclusion: Data are acceptable.

Strontium (ATG 9): RMDL = 20 μg/L, 12 monitoring samples, FH, average = 13.33RMDL, maximum = 19RMDL.

Travelling Blanks: 4 samples were reported with an average = 3.33RMDL, maximum = 13RMDL. Significant field contamination for 1 sample (travelling blank = 360 μg/L, monitoring = 360 μg/L). There were no other occurrences of field contamination and the monitoring concentrations were still large.
Conclusion: Field contamination is negligible.

Conclusion: Data are acceptable.

Tetrachloroethylene (ATG 16): RMDL = 1.1 μg/L, 51 monitoring samples, FH, average = 40.48RMDL. maximum = 309.09RMDL.

Monitoring Lab Corrections: 51 uncorrected samples were reported with an average difference of 0.59RMDL and a maximum difference of 13.64RMDL. Insignificant lab corrections made with respect to the levels of tetrachloroethylene in the effluent.
Conclusion: Laboratory contamination is negligible.

Conclusion: Data are acceptable.

Total H7CDD (ATG 24): RMDL = 30 pg/L, 13 monitoring samples, FH, average = 7.33RMDL, maximum = 17.67RMDL.

Precision: 4 split pairs were reported with an average difference of 0.91RMDL and a maximum difference of 1.67RMDL. All split pairs were in good agreement.
Conclusion: Precision is acceptable.

Conclusion: Data are acceptable.

Total H7CDF (ATG 24): RMDL = 30 pg/L, 13 monitoring samples, FL, average = 2.09RMDL, maximum = 5.67RMDL.

Precision: 4 split pairs were reported with an average difference of 0.42RMDL and a maximum difference of 1.67RMDL. Marginal agreement was determined for only 1 split pair (monitoring = 120 pg/L, split = 170 pg/L). The other split pairs were not detected.
Conclusion: Precision is acceptable.

Conclusion: Data are acceptable.

Total Kjeldahl Nitrogen (ATG 4): RMDL = 0.5 mg/L, 363 monitoring samples, FH, average = 244.89RMDL, maximum = 820RMDL.

Precision: 1 duplicate/10 split pairs were reported with an average split difference of 20.6RMDL and a maximum split difference of 80RMDL. Poor agreement was determined for only 1 split pair (monitoring = 57 mg/L, split = 24 mg/L). The other split pairs and the duplicate pair were in good agreement. The large differences were a result of large concentrations being measured.
Conclusion: Precision is acceptable.

Conclusion: Data are acceptable.

Total O8CDD (ATG 24): RMDL = 30 pg/L, 13 monitoring samples, FH, average = 25:33RMDL, maximum = 50RMDL.

Precision: 4 split pairs were reported with an average difference of 3.83RMDL and a maximum difference of 6.67RMDL. Poor agreement was determined for 1 split pair and marginal agreement for another split pair.
Conclusion: Precision is acceptable.

Conclusion: Data are acceptable.

Total Phosphorus (ATG 6): RMDL = 0.1 mg/L, 51 monitoring samples, FH, average = 13.56RMDL, maximum = 73RMDL.

Precision: 4 split pairs were reported with an average difference of 1.63RMDL and a maximum difference of 3.71RMDL. Poor agreement was determined for 1 split pair and marginal agreement for another split pair.
Conclusion: Precision is acceptable.

Conclusion: Data are acceptable.

Total Suspended Solids (ATG 8): RMDL = 5 mg/L, 362 monitoring samples, FH, average = 39.97RMDL, maximum = 3400RMDL.

Travelling Blanks: Only one sample that was reported showed slight field contamination.
Conclusion: Field contamination is negligible.

Conclusion: Data are acceptable.

Trans-1,2-Dichloroethylene (ATG 16): RMDL = 1.4 μg/L, 13 monitoring samples, FM, average = 4.38RMDL, maximum = 12.86RMDL.

Precision: 1 split/3 duplicate pairs, average duplicate difference of 3.33RMDL, maximum duplicate difference of 6.36RMDL. Poor agreement was determined for the split pair (monitoring = 4.5 μg/L, split = 16 μg/L). All duplicate pairs were in good agreement.
Conclusion: Precision is acceptable.

Monitoring Lab Corrections: 13 uncorrected samples were reported with an average difference of 0.07RMDL and a maximum difference of 0.93RMDL. Only minor corrections were made to the monitoring results.
Conclusion: Laboratory contamination is negligible.

Conclusion: Data are acceptable.

Trichloroethylene (ATG 16): RMDL = 1.9 μg/L, 51 monitoring samples, FL, average = 1.24RMDL, maximum = 5RMDL.

Monitoring Lab Corrections: 51 uncorrected samples were reported with an average difference of 0.05RMDL and a maximum difference of 1.26RMDL.
Conclusion: Laboratory contamination is negligible.

Conclusion: Data are acceptable.

Zinc (ATG 9): RMDL = 10 μg/L, 51 monitoring samples, FL, average = 5.29RMDL, maximum = 150RMDL.

Travelling Blanks: 4 samples were reported with an average = 3.3RMDL, maximum = 12RMDL. One unusual result reported where field contamination is higher than the monitoring result (travelling blank = 120 μg/L, monitoring = 12 μg/L). There were no other occurrences of field contamination.
Conclusion: Field contamination is negligible.

Conclusion: Data are acceptable.

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Aluminum (ATG 9): RMDL = 30 µg/L, 144 monitoring samples, FH, average = 71.53RMDL, maximum = 613.33RMDL.

Precision: 4 duplicate pairs were reported with an average difference of 4.67RMDL and a maximum difference of 7RMDL. All duplicate pairs were in good agreement.
Conclusion: Precision is acceptable.

Conclusion: Data are acceptable.

Ammonia plus Ammonium (ATG 4): RMDL = 0.25 mg/L, 47 monitoring samples, FL, average = 3.09RMDL, maximum = 51.6RMDL.

Precision: 2 duplicate pairs were reported with an average difference of 1.17RMDL and a maximum difference of 2.29RMDL. Poor agreement was determined for 1 duplicate pair. The other duplicate pair was in good agreement.
Conclusion: Precision is acceptable.

Conclusion: Data are acceptable.

Boron (ATG 9): RMDL = 50 µg/L, 11 monitoring samples, IL, average = 0.91RMDL, maximum = 1.6RMDL.

Precision: 2 duplicate pairs were reported with an average difference of 0.54RMDL and a maximum difference of 0.68RMDL.
Conclusion: Insufficient QA/QC information to assess precision.

Conclusion: Data are acceptable.

Chromium (ATG 9): RMDL = 20 μg/L, 48 monitoring samples, IL, average = 0.74RMDL, maximum = 4.51RMDL.

Precision: 2 duplicate pairs were reported with an average difference of 2.22RMDL and a maximum difference of 4.19RMDL. Poor agreement was determined for 1 duplicate pair (monitoring = 90.1 μg/L, duplicate = 6.3 μg/L < RMDL).
Conclusion: Insufficient QA/QC information to assess precision.

Conclusion: Data are equivocal.

Oil and Grease (ATG 25): RMDL = 1 mg/L, 47 monitoring samples, FL, average = 1.43RMDL, maximum = 5RMDL.

Travelling Blanks: 1 sample that was reported shows field contamination equal to the monitoring result (travelling blank = 2 mg/L, monitoring = 2 mg/L).
Conclusion: Insufficient QA/QC information to assess field contamination.

Precision: 2 duplicate pairs were reported with an average difference of 0.5RMDL and a maximum difference of RMDL.
Conclusion: Insufficient QA/QC information to assess precision.

Conclusion: Data are acceptable.

Strontium (ATG 9): RMDL = 20 μg/L, 11 monitoring samples, FH, average = 27.26RMDL, maximum = 83.5RMDL.

Precision: 2 duplicate pairs were reported with an average difference of 1.05RMDL and a maximum difference of 1.7RMDL. Both duplicate pairs were in good agreement.
Conclusion: Precision is acceptable.

Conclusion: Data are acceptable.

Sulphate (ATG I3): RMDL = 5 mg/L, 143 monitoring samples, FH, average = 47.68RMDL, maximum = 152RMDL.

Precision: 3 duplicate pairs were reported with an average difference of 1.2RMDL and a maximum difference of 3.2RMDL. All duplicate pairs were in good agreement.
Conclusion: Precision is acceptable.

Conclusion: Data are acceptable.

Total Suspended Solids (ATG 8): RMDL = 5 mg/L, 340 monitoring samples, FM, average = 3.77RMDL, maximum = 113.6RMDL.

Precision: 3 duplicate pairs were reported with an average difference of 1.07RMDL and a maximum difference of 1.8RMDL. Poor agreement was determined for only 1 duplicate pair (monitoring = 14 mg/L, duplicate = 5 mg/L). The other 2 duplicate pairs were in good agreement.
Conclusion: Precision is acceptable.

Conclusion: Data are acceptable.

Oil and Grease (ATG 25): RMDL = 1 mg/L, 10 monitoring samples, FL, average = 1.82RMDL, maximum = 3.1RMDL.

Travelling Blanks: 3 samples were reported with an average = 2.3RMDL, maximum = 4.3RMDL. Slight field contamination for 1 sample (travelling blank = 1.7 mg/L, monitoring = 2.8 mg/L). 1 sample that was reported shows field contamination is higher than the monitoring result (travelling blank = 4.3 mg/L, monitoring = 2.7 mg/L).
Conclusion: Insufficient QA/QC information to assess field contamination.

Precision: 2 duplicate pairs were reported with an average difference of 2.55RMDL and a maximum difference of 4.7RMDL. Poor agreement was determined for 1 duplicate pair (monitoring = 2.7 mg/L, duplicate = 7.4 mg/L).
Conclusion: Insufficient QA/QC information to assess precision.

Conclusion: Data are equivocal.

Total Phosphorus (ATG 6): RMDL = 0.1 mg/L, 13 monitoring samples, IL, average = 0.68RMDL, maximum = 1.2RMDL.

Precision: 4 duplicate pairs were reported with an average difference of 0.2RMDL and a maximum difference of 0.44RMDL. Poor agreement was determined for only 1 duplicate pair (monitoring = 0.12 mg/L, duplicate = 0.08 mg/L <RMDL). The other duplicate pairs were not detected.
Conclusion: Precision is acceptable.

Conclusion: Data are acceptable.

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DOC (ATG 5): RMDL = 0.5 mg/L, 12 monitoring samples, FM, average = 4.96RMDL, maximum = 7RMDL.

Precision: 1 split pair was provided with a difference of 4.88RMDL. The split pair is in poor agreement (monitoring = 2.45 mg/L, split = 4.89 mg/L). Precision may be limited but not enough samples were provided to conclude this.
Conclusion: Insufficient QA/QC information to assess precision.

Conclusion: Data are equivocal.

Nitrate+Nitrite (ATG 4): RMDL = 0.25 mg/L, 11 monitoring samples, FH, average = 201.47RMDL, maximum = 427.6RMDL.

Precision: 1 split pair was reported with a difference of 4RMDL. The split pair was in good agreement.
Conclusion: Insufficient QA/QC information to assess precision.

Conclusion: Data are acceptable.

1,2,3,4-Tetrachlorobenzene (ATG 23): RMDL = 10 ng/L, 13 monitoring samples, FM, average = 3.75RMDL, maximum = 11.6RMDL.

Travelling Spiked Blanks: 5 samples were reported with an average spike of 8.1RMDL. Recoveries ranged from 91 to 181% (average = 112%). Only 1 sample was greater than 140%.
Conclusion: Recoveries are acceptable.

Precision: 5 split pairs were reported with an average difference of 0.82RMDL and a maximum difference of 2RMDL. All samples were reported with good or marginal agreement.
Conclusion: Precision is acceptable.

Conclusion: Data are acceptable.

1,2,3,5-Tetrachlorobenzene (ATG 23): RMDL = 10 ng/L, 13 monitoring samples, FM, average = 5.21RMDL, maximum = 19.8RMDL.

Travelling Spiked Blanks: 5 samples were reported with an average spike of 13.7RMDL. Recoveries ranged from 90 to 181% (average = 118%). Only 1 sample was greater than 140%.
Conclusion: Recoveries are acceptable.

Precision: 5 split pairs were reported with an average difference of 2.88RMDL and a maximum difference of 7.15RMDL. Poor agreement was determined for 2 split pairs and marginal agreement for 1 split pair.
Precision may be limited but was usually detected.
Conclusion: Precision is acceptable.

Conclusion: Data are acceptable.

1,2,3-Trichlorobenzene (ATG 23): RMDL = 10 ng/L, 13 monitoring samples, FM, average = 5.21RMDL, maximum = 19.8RMDL.

Travelling Spiked Blanks: 5 samples were reported with an average spike of 13.7RMDL. Recoveries ranged from 90 to 181% (average = 118%). Only 1 sample was greater than 140%. The other recoveries were in the range of 60% to 140%.
Conclusion: Recoveries are acceptable.

Precision: 5 split pairs were reported with an average difference of 2.88RMDL and a maximum difference of 7.15RMDL. Poor agreement was determined for 1 split pair.
Conclusion: Precision is acceptable.

Conclusion: Data are acceptable.

1,2,4,5-Tetrachlorobenzene (ATG 23): RMDL = 10 ng/L, 13 monitoring samples, FL, average = 2.08RMDL, maximum = 4.40RMDL.

Travelling Spiked Blanks: 5 samples were reported with an average spike of 8.1RMDL. Recoveries ranged from 93 to 183% (average = 113%). Only 1 sample was greater than 140%.
Conclusion: Recoveries are acceptable.

Precision: 5 split pairs were reported with an average difference of 0.68RMDL and a maximum difference of 1.40RMDL. Poor agreement was determined for 1 split pair (monitoring = 17 ng/L, split = 3 ng/L <DL).
Conclusion: Precision is acceptable.

Conclusion: Data are acceptable.

1,2,4-Trichlorobenzene (ATG 23): RMDL = 10 ng/L, 13 monitoring samples, FM, average = 4.74RMDL, maximum = 12.5RMDL.

Travelling Spiked Blanks: 5 samples were reported with an average spike of 13.7RMDL. Recoveries ranged from 46 to 175% (average = 99%). Only 1 sample was less than 60% and only 1 sample was greater than 140%.
Conclusion: Recoveries are acceptable.

Precision: 5 split pairs were reported with an average difference of 2.46RMDL and a maximum difference of 5.80RMDL. Poor agreement was determined for 1 split pair and marginal agreement for another split pair.
Conclusion: Precision is acceptable.

Conclusion: Data are acceptable.

2,4,5-Trichlorotoluene (ATG 23): RMDL = 10 ng/L, 13 monitoring samples, FM, average = 3.97RMDL, maximum = 8.30RMDL.

Travelling Spiked Blanks: 5 samples were reported with an average spike of 13.7RMDL. Recoveries ranged from 87 to 177% (average = 109%). Only 1 sample was greater than 140%.
Conclusion: Recoveries are acceptable.

Precision: 5 split pairs were reported with an average difference of 1.54RMDL and a maximum difference of 3.5RMDL. Poor agreement was determined for 1 split pair and marginal agreement for another split pair.
Conclusion: Precision is acceptable.

Conclusion: Data are acceptable.

Ammonia plus Ammonium (ATG 4): RMDL = 0.25 mg/L, 13 monitoring samples, FH, average = 197.91RMDL, maximum = 800RMDL.

Precision: 5 split pairs were reported with an average difference of 6.4RMDL and a maximum difference of 16RMDL. All split pairs were in good agreement. Large differences were a result of large concentrations.
Conclusion: Precision is acceptable.

Conclusion: Data are acceptable.

Aluminum (ATG 9): RMDL = 30 μg/L, 157 monitoring samples, FH, average = 12.63RMDL, maximum = 67.83RMDL.

Travelling Blanks: 13 samples were reported with an average = 1.23RMDL, maximum = 6.53RMDL. Significant field contamination reported for only 1 sample (travelling blank = 196 μg/L, monitoring = 255 μg/L). No other field contamination was reported.
Conclusion: Field contamination is negligible.

Precision: 4 duplicate pairs were reported with an average difference of 0.92RMDL and a maximum difference of 1.67RMDL. All duplicate pairs were in good agreement. 14 split pairs were also reported with an average difference of 1.96RMDL and a maximum difference of 4.93RMDL. The large differences resulted since two laboratories had done the analyses. Poor to marginal agreement between the two laboratories but good agreement for one laboratory that provided both the monitoring and the split results.
Conclusion: Precision is acceptable.

Conclusion: Data are acceptable.

Benzene (ATG 17): RMDL = 0.5 μg/L, 2 monitoring samples, FL, average = 3.38RMDL, maximum = 5.4RMDL.

Monitoring Lab Corrections: 2 uncorrected samples were reported with an average difference of 1.91RMDL and a maximum difference of 2.6RMDL. Minor laboratory contamination for both samples but still detected.
Conclusion: Insufficient QA/QC information to assess laboratory contamination.

Conclusion: Data are equivocal.

Beryllium (ATG 9): RMDL = 10 μg/L, 13 monitoring samples, IL, average = 0.58RMDL, maximum = 1.20RMDL.

Travelling Blanks: 6 samples were reported with an average = 0.73RMDL, maximum = 1.20RMDL. The laboratory did not detect beryllium but did not meet the RMDL.
Conclusion: Field contamination is negligible.

Precision: 1 split pair was reported with a difference of 1.04RMDL. Difference result because two laboratories had done the analyses.
Conclusion: Precision is acceptable.

Conclusion: Data are acceptable but has been highlighted since a laboratory did not meet the RMDL.

Boron (ATG 9): RMDL = 50 μg/L, 10 monitoring samples, FL, average = 2.98RMDL, maximum = 9RMDL.

Precision: 3 duplicate pairs were reported with an average difference of 0.79RMDL and a maximum difference of 1.82RMDL. Poor agreement was determined for 1 duplicate pair (monitoring = 83 μg/L, duplicate = 174 μg/L). The other 2 duplicate pairs were below the RMDL.
Conclusion: Precision is acceptable.

Conclusion: Data are acceptable.

Cadmium (ATG 9): RMDL = 2 μg/L, 157 monitoring samples, FH, average = 12.01RMDL, maximum = 63.5RMDL.

Precision: 14 split pairs were reported with an average difference of 2.75RMDL and a maximum difference of 11.5RMDL. Large difference for split pairs resulted since two laboratories had done the analysis. Good agreement prevailed when Lab 2 provided both the monitoring result and the split sample.
Conclusion: Precision is acceptable since Lab 2 provided most of the monitoring results.

Conclusion: Data are acceptable but has been highlighted since a laboratory did not meet the RMDL.

Carbon Tetrachloride (ATG 16): RMDL = 1.3 μg/L, 14 monitoring samples, FL, average = 21.49RMDL, maximum = 96.15RMDL.

Precision: 10 duplicate pairs were reported with an average difference of 2.67RMDL and a maximum difference of 21.54RMDL. Marginal agreement was determined for 1 duplicate pair (monitoring = 125 μg/L, duplicate = 153 μg/L). Good agreement for the other duplicate pairs.
Conclusion: Precision is acceptable.

Conclusion: Data are acceptable.

Chloride (ATG I1): RMDL = 2 mg/L, 156 monitoring samples, FH, average = 691.31RMDL, maximum = 5625RMDL.

Precision: 13 split pairs were reported with an average difference of 2.43RMDL and a maximum difference of 12RMDL. All split pairs were in good agreement. The large differences were a result of large concentrations being measured.
Conclusion: Precision is acceptable.

Conclusion: Data are acceptable.

Chloroform (ATG 16): RMDL = 0.7 μg/L, 154 monitoring samples, FH, average = 70.59RMDL, maximum = 11062.86RMDL.

Monitoring Lab Corrections: 154 uncorrected samples were reported with an average difference of 0.95RMDL and a maximum difference of 132.43RMDL. Large correction result of possible data entry error (monitoring = 10.3 μg/L, uncorrected monitoring = 103 μg/L). One other correction was reported since two laboratories had done the analyses. No other apparent corrections were made to the monitoring samples.
Conclusion: Laboratory contamination is negligible.

Conclusion: Data are acceptable.

Copper (ATG 9): RMDL = 10 μg/L, 157 monitoring samples, FH, average = 67.89RMDL, maximum = 920RMDL.

Precision: 4 duplicate pairs were reported with an average difference of 0.5RMDL and a maximum difference of RMDL. All duplicate pairs were in good agreement. 14 splits samples were also reported with an average difference of 1.57RMDL and a maximum difference of 6.6RMDL. All split pairs were in good agreement even though two laboratories had done the analyses.
Conclusion: Precision is acceptable.

Conclusion: Data are acceptable.

Dibromochloromethane (ATG 16): RMDL = 1.1 μg/L, 54 monitoring samples, IL, average = 2.60RMDL, maximum = 97.27RMDL.

Travelling Spiked Blanks: 9 samples were reported with an average spike of 21.2RMDL. Recoveries ranged from 86 to 111% (average = 96%).
Corrections to Travelling Spiked Blanks: 9 uncorrected travelling spiked blank samples were reported with an average difference of 2.16RMDL and a maximum difference of 19.45RMDL. Large difference result of data entry error (travelling spiked blank = 21.9 μg/L, uncorrected travelling spiked blank = 0.5 μg/L <DL). No other corrections were reported to the travelling spiked blanks.
Conclusion: Recoveries are acceptable since no apparent corrections made to the samples.

Conclusion: Data are acceptable.

DOC (ATG 5): RMDL = 0.5 mg/L, 53 monitoring samples, FH, average = 104.13RMDL, maximum = 2170RMDL.

Precision: 5 split pairs were reported with an average difference of 1.04RMDL and a maximum difference of 2.4RMDL. All split pairs were in good agreement.
Conclusion: Precision is acceptable.

Conclusion: Data are acceptable.

Hexachlorobenzene (ATG 23): RMDL = 10 ng/L, 13 monitoring samples, FH, average = 40.37RMDL, maximum = 144RMDL.

Travelling Spiked Blanks: 5 samples were reported with an average spike of 8.1RMDL. Recoveries ranged from 88 to 172% (average = 109%). Only 1 sample was greater than 140%. The other recoveries were in the range of 60% to 140%.
Conclusion: Recoveries are acceptable.

Precision: 5 split pairs were reported with an average difference of 5.3RMDL and a maximum difference of 12RMDL. Marginal agreement was determined for only 1 split pair (monitoring = 403 ng/L, split = 302 ng/L). The other split pairs were in good agreement.
Conclusion: Precision is acceptable.

Conclusion: Data are acceptable.

Hexachlorobutadiene (ATG 23): RMDL = 10 ng/L, 13 monitoring samples, FM, average = 4.25RMDL, maximum = 22RMDL.

Precision: 5 split pairs were reported with an average difference of 2.74RMDL and a maximum difference of 11.5RMDL. Poor agreement was determined for 1 split pair and marginal agreement for another split pair.
Conclusion: Precision is acceptable.

Conclusion: Data are acceptable.

Hexachlorocyclopentadiene (ATG 24): RMDL = 10 ng/L, 13 monitoring samples, FL, average = 1.86RMDL, maximum = 6RMDL.

Travelling Blanks: 13 samples were reported with an average = 1.7RMDL, maximum = 1.7RMDL. The laboratory that did the analyses did not detect hexachlorocyclopentadiene but did not meet the RMDL for all the samples.
Conclusion: Field contamination is negligible.

Travelling Spiked Blanks: 5 samples were reported with an average spike of 8.1RMDL. Recoveries ranged from 14 to 89% (average = 41%). 4 samples were less than 60% (the measured results were all non-detects).
Conclusion: Recoveries are poor.

Conclusion: Data are equivocal but has been highlight since a laboratory did not meet the RMDL.

Hexachloroethane (ATG 23): RMDL = 10 ng/L, 13 monitoring samples, FH, average = 169.34RMDL, maximum = 521RMDL.

Precision: 5 split pairs were reported with an average difference of 15.74RMDL and a maximum difference of 30RMDL. Poor agreement was determined for 1 split pair (monitoring = 620 ng/L, split = 920 ng/L). The other split pairs were in good agreement.
Conclusion: Precision is acceptable.

Conclusion: Data are acceptable.

Lead (ATG 9): RMDL = 30 μg/L, 157 monitoring samples, FH, average = 24.26RMDL, maximum = 181.5RMDL.

Travelling Blanks: 13 samples were reported with an average = 0.68RMDL, maximum = 2.77RMDL. Minor field contamination was reported for 1 sample (travelling blank = 83 μg/L, monitoring = 250 μg/L). No other field contamination was reported.
Conclusion: Field contamination is negligible.

Precision: 4 duplicate pairs were reported with an average difference of 0.45RMDL and a maximum difference of RMDL. All duplicate pairs were in good agreement. 14 split pairs were also reported with an average difference of 0.63RMDL and a maximum difference of 1.87RMDL. Poor agreement was determined for only 1 split pair which resulted since two laboratories had done the analyses (monitoring = 104 μg/L Lab 1, split = 160 μg/L Lab 2). All other split pairs were in good agreement.
Conclusion: Precision is acceptable.

Conclusion: Data are acceptable.

Molybdenum (ATG 9): RMDL = 20 μg/L, 13 monitoring samples, IL, average = 0.46RMDL, maximum = 1.60RMDL.

Travelling Blanks: 6 samples were reported with an average = 0.70RMDL, maximum = 1.60RMDL. The laboratory did not detect molybdenum also did not meet the RMDL.
Conclusion: Field contamination is negligible.

Conclusion: Data are acceptable in showing the that molybdenum is not present but has been highlighted since a laboratory did not meet the RMDL.

Nickel (ATG 9): RMDL = 20 μg/L, 56 monitoring samples, FM, average = 11.93RMDL, maximum = 126RMDL.

Precision: 4 duplicate pairs were reported with an average difference of 0.21RMDL and a maximum difference of 0.5RMDL. All duplicate pairs were in good agreement. 11 split pairs were also reported with an average difference of 0.83RMDL and a maximum difference of 2.8RMDL. Poor agreement was determined for only 1 split pair (monitoring = 88 μg/L, split = 126 μg/L) and marginal agreement for another split pair which resulted since two laboratories had done the analyses (monitoring = 88 μg/L Lab 1, split = 144 μg/L Lab 2). The other split pairs were in good agreement.
Conclusion: Precision is acceptable.

Conclusion: Data are acceptable.

Nitrate+Nitrite (ATG 4): RMDL = 0.25 mg/L, 156 monitoring samples, FH, average = 227.68RMDL, maximum = 5200RMDL.

Precision: 5 duplicate pairs were reported with an average difference of 4.1RMDL and a maximum difference of 20RMDL. All duplicate pairs were in good agreement. The large differences were a result of large concentrations being measured. 10 split pairs were also reported with an average difference of 3.21RMDL and a maximum difference of 20RMDL. All split pairs were in good agreement. The large differences were again a result of large concentrations being measured.
Conclusion: Precision is acceptable.

Conclusion: Data are acceptable.

Octachlorostyrene (ATG 23): RMDL = 10 ng/L, 13 monitoring samples, FL, average = 1.72RMDL, maximum = 9.6RMDL.

Precision: 5 split pairs were reported with an average difference of 0.52RMDL and a maximum difference of 2RMDL. Good agreement for all samples.
Conclusion: Precision is acceptable.

Conclusion: Data are acceptable.

Pentachlorobenzene (ATG 23): RMDL = 10 ng/L, 13 monitoring samples, FM, average = 3.53RMDL, maximum = 9.3RMDL.

Travelling Spiked Blanks: 5 samples were reported with an average spike of 8.1RMDL. Recoveries ranged from 93 to 177% (average = 112%). Only 1 sample was greater than 140%.
Conclusion: Recoveries are acceptable.

Conclusion: Data are acceptable.

Strontium (ATG 9): RMDL = 20 μg/L, 8 monitoring samples, FH, average = 14.39RMDL, maximum = 28.5RMDL.

Precision: 3 duplicate pairs were reported with an average difference of 0.67RMDL and a maximum difference of 1.5RMDL. All duplicate pairs were in good agreement.
Conclusion: Precision is acceptable.

Conclusion: Data are acceptable.

Sulphate (ATG I3): RMDL = 5 mg/L, 154 monitoring samples, FH, average = 338.21RMDL, maximum = 500RMDL.

Precision: 7 split pairs were reported with an average difference of 9.14RMDL and a maximum difference of 20RMDL. All split pairs were in good agreement. The large differences were a result of large concentrations being measured.
Conclusion: Precision is acceptable.

Conclusion: Data are acceptable.

Tetrachloroethylene (ATG 16): RMDL = 1.1 μg/L, 54 monitoring samples, FL, average = 2.32RMDL, maximum = 8.09RMDL.

Travelling Spiked Blanks: 9 samples were reported with an average spike of 20.7RMDL. Recoveries ranged from 82 to 112% (average = 99%).
Corrections to Travelling Spiked Blanks: 9 uncorrected travelling spiked blank samples were reported with an average difference of 2.29RMDL and a maximum difference of 20.64RMDL. Large difference result of data entry error (travelling spiked blank = 23.1 μg/L, uncorrected travelling spiked blank = 0.4 μg/L <DL). No other corrections were reported to the travelling spiked blanks.
Conclusion: Recoveries are acceptable since no apparent corrections made to the samples.

Conclusion: Data are acceptable.

Thallium (ATG 9): RMDL = 30 μg/L, 157 monitoring samples, FL, average = 1.21RMDL, maximum = 5.33RMDL.

Travelling Blanks: 13 samples were reported with an average = 1.01RMDL, maximum = 1.10RMDL. The laboratory did not detect thallium but did not meet the RMDL.
Conclusion: Field contamination is negligible.

Precision: 14 split pairs were reported with an average difference of 0.25RMDL and a maximum difference of 1.10RMDL. High difference result because two laboratories had done the analyses (monitoring = 27 μg/L <DL Lab 1, duplicate = 60 μg/L Lab 2). 1 split pair done by two labs was in good agreement (monitoring = 60 μg/L Lab 1, duplicate = 50 μg/L Lab 2). Most of the split pairs were non-detects.
Conclusion: Precision is acceptable.

Conclusion: Data are acceptable but has been highlighted since a laboratory did not meet the RMDL.

Total Kjeldahl Nitrogen (ATG 4): RMDL = 0.5 mg/L, 13 monitoring samples, FH, average = 69.74RMDL, maximum = 290RMDL.

Precision: 5 split pairs were reported with an average difference of 6RMDL and a maximum difference of 20RMDL. All split pairs were in good agreement. The large differences were a result of large concentrations being measured.
Conclusion: Precision is acceptable.

Conclusion: Data are acceptable.

Total Suspended Solids (ATG 8): RMDL = 5 mg/L, 248 monitoring samples, FH, average = 16.68RMDL, maximum = 116RMDL.

Precision: 7 split pairs were reported with an average difference of 1.03RMDL and a maximum difference of 3.2RMDL. Marginal agreement was determined for only 1 split pair (monitoring = 26 mg/L, split = 34 mg/L). All other split pairs were in good agreement.
Conclusion: Precision is acceptable.

Conclusion: Data are acceptable.

Zinc (ATG 9): RMDL = 10 μg/L, 157 monitoring samples, FH, average = 18.71RMDL, maximum = 128.6RMDL.

Precision: 4 duplicate pairs were reported with an average difference of 0.38RMDL and a maximum difference of RMDL. All duplicate pairs were in good agreement. 14 split pairs were also reported with an average difference of 1.25RMDL and a maximum difference of 5.4RMDL. Marginal to good agreement for all split pairs even though two laboratories had done the analyses.
Conclusion: Precision is acceptable.

Conclusion: Data are acceptable.

Aluminum (ATG 9): RMDL = 30 μg/L, 147 monitoring samples, FH, average = 7.99RMDL, maximum = 31RMDL.

Precision: 12 split pairs were reported with an average difference of 1.09RMDL and a maximum difference of 4.33RMDL. Marginal agreement was determined for only 2 split pairs.
Conclusion: Precision is acceptable.

Conclusion: Data are acceptable.

Chloride (ATG I1): RMDL = 2 mg/L, 147 monitoring samples, FH, average = 912.98RMDL, maximum = 2380RMDL.

Precision: 12 split pairs were reported with an average difference of 17.29RMDL and a maximum difference of 80RMDL. All split pairs were in good agreement. The large differences were a result of large concentrations being measured.
Conclusion: Precision is acceptable.

Conclusion: Data are acceptable.

Nitrate+Nitrite (ATG 4): RMDL = 0.25 mg/L, 47 monitoring samples, FH, average = 38.77RMDL, maximum = 115.4RMDL.

Precision: 4 split pairs were reported with an average difference of 2.04RMDL and a maximum difference of 4.8RMDL. All split pairs were in good agreement.
Conclusion: Precision is acceptable.

Conclusion: Data are acceptable.

Oil and Grease (ATG 25): RMDL = 1 mg/L, 49 monitoring samples, FL, average = 2.26RMDL, maximum = 8.1RMDL.

Precision: 3 split pairs were reported with an average difference of 1.33RMDL and a maximum difference of 4RMDL. Poor agreement was determined for 1 split pair (monitoring = 1.2 mg/L, split = 5.2 mg/L).
Conclusion: Precision is acceptable.

Conclusion: Data are acceptable.

Strontium (ATG 9): RMDL = 20 μg/L, 12 monitoring samples, FH, average = 332.25RMDL, maximum = 600RMDL.

Precision: 4 split pairs were reported with an average difference of 19.13RMDL and a maximum difference of 34RMDL. All split pairs were in good agreement. The large differences were a result of large concentrations being measured.
Conclusion: Precision is acceptable.

Conclusion: Data are acceptable.

Sulphate (ATG I3): RMDL = 5 mg/L, 147 monitoring samples, FH, average = 327.53RMDL, maximum = 1578RMDL.

Precision: 12 split pairs were reported with an average difference of 9RMDL and a maximum difference of 26RMDL. All split pairs were in good agreement. The large differences were a result of large concentrations being measured.
Conclusion: Precision is acceptable.

Conclusion: Data are acceptable.

Total Phosphorus (ATG 6): RMDL = 0.1 mg/L, 144 monitoring samples, FH, average = 6.66RMDL, maximum = 16.2RMDL.

Precision: 12 split pairs were reported with an average difference of 1.27RMDL and a maximum difference of 6.2RMDL. Poor agreement was determined for only 2 split pairs and marginal agreement for only 1 split pair.
Conclusion: Precision is acceptable.

Conclusion: Data are acceptable.

Zinc (ATG 9): RMDL = 10 μg/L, 124 monitoring samples, FH, average = 33.61RMDL, maximum = 134RMDL.

Travelling Blanks: 12 samples were reported with an average = 3.08RMDL, maximum = 29RMDL. Significant field contamination for 1 sample (travelling blank = 290 μg/L, monitoring = 450 μg/L). Other travelling blank samples were negligible.
Conclusion: Field contamination is negligible.

Conclusion: Data are acceptable.

Aluminum (ATG 9): RMDL = 30 μg/L, 12 monitoring samples, FM, average = 6.94RMDL, maximum = 16RMDL.

Travelling Blanks: 4 samples were reported with an average = 4.43RMDL, maximum = 16RMDL. One unusual result where field contamination is higher than the monitoring result but seems significant (travelling blank = 480 μg/L, monitoring = 460 μg/L). One other detect in travelling blank has minor contamination (travelling blank = 34 μg/L, monitoring = 66 μg/L).
Conclusion: Field contamination is negligible.

Conclusion: Data are acceptable.

Chloride (ATG I1): RMDL = 2 mg/L, 156 monitoring samples, FH, average = 75.29RMDL, maximum = 420RMDL.

Precision: 5 duplicate pairs were reported with an average difference of 0.4RMDL and a maximum difference of 1.5RMDL. All duplicate pairs were in good agreement. 7 split pairs were also reported with average difference of 11RMDL and a maximum difference of 50.5RMDL. Marginal agreement was determined for only 1 split pair (monitoring = 120 mg/L, split = 19 mg/L). All other split pairs were in good agreement.
Conclusion: Precision is acceptable.

Conclusion: Data are acceptable.

Chromium (ATG 9): RMDL = 20 μg/L, 12 monitoring samples, IL, average = 0.54RMDL, maximum = 1.45RMDL.

Precision: 1 duplicate and 3 split pairs were reported with an average split difference of 0.03RMDL and a maximum split difference of 0.1RMDL. All split pairs were not detected. Good agreement was determined for the duplicate and split pairs.
Conclusion: Insufficient QA/QC information to assess precision.

Conclusion: Data are acceptable.

DOC (ATG 5): RMDL = 0.5 mg/L, 52 monitoring samples, FH, average = 14.68RMDL, maximum = 162RMDL.

Precision: 1 duplicate/2 split pairs were reported with an average split difference of 1.53RMDL and a maximum split difference of 2RMDL. Marginal agreement was determined for 1 split pair (monitoring = 4.8 mg/L, split = 3.8 mg/L). The other split pair and the duplicate pair were in good agreement.
Conclusion: Precision is acceptable.

Conclusion: Data are acceptable.

Strontium (ATG 9): RMDL = 20 μg/L, 12 monitoring samples, FH, average = 50.04RMDL, maximum = 80RMDL.

Precision: 1 duplicate/3 split pairs were reported with an average split difference of 2.33RMDL and a maximum split difference of 5RMDL. Good agreement for the duplicate pair and all split pairs.
Conclusion: Precision is acceptable.

Conclusion: Data are acceptable.

Sulphate (ATG I3): RMDL = 5 mg/L, 156 monitoring samples, FH, average = 48.08RMDL, maximum = 200RMDL.

Precision: 5 duplicate pairs were reported with an average difference of 0.64RMDL and a maximum difference of 2RMDL. All duplicate pairs were in good agreement. 7 split pairs were also reported with an average difference of 6.4RMDL and a maximum difference of 22.8RMDL. Poor agreement was determined for only 1 split pair and marginal agreement for another split pair.
Conclusion: Precision is acceptable.

Conclusion: Data are acceptable.

TOC (ATG 5): RMDL = 5 mg/L, 5 monitoring samples, IL, average = 0.62RMDL, maximum = 1.16RMDL.

Travelling Blanks: 4 samples were reported with an average = 0.56RMDL, maximum = 1.80RMDL. The dates when the travelling blanks were taken do not correspond to the dates the monitoring results were taken. From the travelling blank results, field contamination may be possible but conclusion cannot be made without further proof.
Conclusion: Insufficient data to assess field contamination.

Conclusion: Data are equivocal.

Total Suspended Solids (ATG 8): RMDL = 5 mg/L, 363 monitoring samples, IL, average = 1.16RMDL, maximum = 56RMDL.

Precision: 5 duplicate pairs were reported with an average difference of 0.4RMDL and a maximum difference of 1.4RMDL. Marginal agreement was determined for 2 duplicate pairs. The other duplicate pairs were not detected. 7 split pairs were also reported with an average difference of 0.08RMDL and a maximum difference of 0.4RMDL. All split pairs were in good agreement.
Conclusion: Precision is acceptable.

Conclusion: Data are acceptable.

Zinc (ATG 9): RMDL = 10 μg/L, 12 monitoring samples, FM, average = 5.29RMDL, maximum = 15RMDL.

Travelling Blanks: 4 samples were reported with an average = 0.95RMDL, maximum = 2.6RMDL. Significant field contamination was reported for 1 sample (travelling blank = 26 μg/L, monitoring = 46 mg/L). No other field contamination was reported.
Conclusion: Field contamination is negligible.

Precision: 1 duplicate/3 split pairs were reported with an average difference of 1.6RMDL and a maximum difference of 2.4RMDL. Marginal agreement was determined for 2 split pairs.
Conclusion: Precision is acceptable.

Conclusion: Data are acceptable.

Aluminum (ATG 9): RMDL = 30 µg/L, 48 monitoring samples, FL, average = 2.2.6RMDL, maximum = 10.67RMDL.

Precision: 4 duplicate pairs were reported with an average difference of 1.59RMDL and a maximum difference of 4.33RMDL. Poor agreement was determined for 1 duplicate pair and marginal agreement for 2 duplicate pairs.
Conclusion: Precision is acceptable.

Conclusion: Data are acceptable.

Boron (ATG 9): RMDL = 50 µg/L, 12 monitoring samples, FH, average = 16.15RMDL, maximum = 74RMDL.

Precision: 4 duplicate pairs were reported with an average difference of 0.7RMDL and a maximum difference of 2RMDL. All duplicate pairs were in good agreement.
Conclusion: Precision is acceptable.

Conclusion: Data are acceptable.

Chloride (ATG I1): RMDL = 2 mg/L, 141 monitoring samples, FH, average = 1114.9RMDL, maximum = 1450RMDL.

Precision: 12 duplicate pairs were reported with an average difference of 41.79RMDL and a maximum difference of 150RMDL. All duplicate pairs were in good agreement. The large differences were a result of large concentrations being measured.
Conclusion: Precision is acceptable.

Conclusion: Data are acceptable.

Oil and Grease (ATG 25): RMDL = 1 mg/L, 47 monitoring samples, FM, average = 6.13RMDL, maximum = 59RMDL.

Precision: 4 duplicate pairs were reported with an average difference of 1.05RMDL and a maximum difference of 2.1RMDL. Marginal agreement was determined for 2 duplicate pairs but definitely were detected.
Conclusion: Precision is acceptable.

Conclusion: Data are acceptable.

Strontium (ATG 9): RMDL = 20 μg/L, 12 monitoring samples, FH, average = 537.25RMDL, maximum = 2850RMDL.

Precision: 4 duplicate pairs were reported with an average difference of 58.75RMDL and a maximum difference of 200RMDL. All duplicate pairs were in good agreement with one substantial outlier in the dataset (monitoring = 57000 μg/L, duplicate = 53000 μg/L). Other samples were less than 10000 μg/L.
Conclusion: Precision is acceptable.

Conclusion: Data are acceptable.

Sulphate (ATG I3): RMDL = 5 mg/L, 141 monitoring samples, FH, average = 145.38RMDL, maximum = 188RMDL.

Precision: 12 duplicate pairs were reported with an average difference of 5.53RMDL and a maximum difference of 20RMDL. All duplicate pairs were in good agreement. The large differences were a result of large concentrations being measured.
Conclusion: Precision is acceptable.

Conclusion: Data are acceptable.

Aluminum (ATG 9): RMDL = 30 μg/L, 49 monitoring samples, FM, average = 4.91RMDL, maximum = 23.33RMDL.

Precision: 4 duplicate pairs were reported with an average difference of 1.08RMDL and a maximum difference of 2.2RMDL. Poor agreement was determined for only 1 duplicate pair (monitoring = 54 μg/L, duplicate = 120 μg/L). The other duplicate pairs were in good agreement.
Conclusion: Precision is acceptable.

Conclusion: Data are acceptable.

Copper (ATG 9): RMDL = 10 μg/L, 12 monitoring samples, IM, average = 0.61RMDL, maximum = 2.60RMDL.

Travelling Blanks: 4 samples were reported with an average = 1.05RMDL, maximum = 1.90RMDL. One unusual result where field contamination is higher than the monitoring result (travelling blank = 19 μg/L, monitoring = 4 μg/L <RMDL). Possible field contamination for one other sample (travelling blank = 19 μg/L, monitoring = 26 μg/L). Other two travelling blanks corresponded to two undetected monitoring results.
Conclusion: Field contamination is negligible.

Precision: 4 duplicate pairs were reported with an average difference of 0.15RMDL and a maximum difference of 0.6RMDL. All results were in good agreement.
Conclusion: Precision is acceptable.

Conclusion: Data are acceptable.

Oil and Grease (ATG 25): RMDL = 1 mg/L, 49 monitoring samples, IL, average = 1.06RMDL, maximum = 2.5RMDL.

Travelling Blanks: 4 samples were reported with an average = 1.1RMDL, maximum = 1.5RMDL. One unusual result where field contamination is higher than the monitoring result (travelling blank = 1.5 mg/L, monitoring = 0.96 mg/L <DL).
Conclusion: Field contamination is negligible.

Precision: 4 duplicate pairs were reported with an average difference of 0.23RMDL and a maximum difference of 0.80RMDL. Marginal agreement was determined for one duplicate pair (monitoring = 1.3 mg/L, duplicate = 2.1 mg/L).
Conclusion: Precision is acceptable.

Conclusion: Data are acceptable.

Phenolics (4AAP) (ATG 14): RMDL = 2 μg/L, 12 monitoring samples, FL, average = 1.17RMDL, maximum = 3RMDL.

Precision: 4 duplicate pairs were reported with an average difference of 0.25RMDL and a maximum difference of RMDL. Marginal agreement was determined for one duplicate pair. All other duplicate pairs were reasonable.
Conclusion: Precision is acceptable.

Conclusion: Data are acceptable.

Methylene Chloride (ATG 16): RMDL = 1.3 μg/L, 7 monitoring samples, FL, average = 0.95RMDL, maximum = 1.80RMDL.

Monitoring Lab Corrections: 7 uncorrected samples were reported with an average difference of 1.70RMDL and a maximum difference of 2.15RMDL. Some significant contamination reported for this parameter.
Conclusion: Laboratory contamination is significant.

Conclusion: Data are unsuitable.

---

o-Xylene (ATG 17): RMDL = 0.5 μg/L, 7 monitoring samples, IL, average = 0.86RMDL, maximum = 1.20RMDL.

Monitoring Lab Corrections: 7 uncorrected samples were reported with an average difference of 0.09RMDL and a maximum difference of 0.60RMDL. Only 1 significant contamination reported (monitoring = 0.4 μg/L <DL, uncorrected = 0.7 μg/L). Most of the monitoring results were below the RMDL.
Conclusion: Laboratory contamination is negligible.

Conclusion: Data are acceptable.

Methylene Chloride (ATG 16): RMDL = 1.3 μg/L, 10 monitoring samples, IM, average = 0.66RMDL, maximum = 4.54RMDL.

Monitoring Lab Corrections: 10 uncorrected samples were reported with an average difference of 1.95RMDL and a maximum difference of 3.08RMDL. Laboratory contamination was significant but also consistent.
Conclusion: Laboratory contamination is significant.

Conclusion: Data is unsuitable.

Chloroform (ATG 16): RMDL = 0.7 μg/L, 10 monitoring samples, FH, average = 29.61RMDL, maximum = 44.86RMDL.

Monitoring Lab Corrections: 10 uncorrected samples were reported with an average difference of 0.53RMDL and a maximum difference of 1.43RMDL. Only 3 samples with minor laboratory contamination were reported. The other samples did not have laboratory contamination.
Conclusion: Laboratory contamination is negligible.

Conclusion: Data is acceptable.

Oil and Grease (ATG 25): RMDL = 1 mg/L, 12 monitoring samples, FL, average = 1.51RMDL, maximum = 4RMDL.

Precision: 2 duplicate pairs were reported with an average difference of RMDL and a maximum difference of 2RMDL. Poor agreement was determined for 1 duplicate pair (monitoring = 4 mg/L, duplicate = 2 mg/L). The other duplicate pair was non-detected. Precision may be limited.
Conclusion: Insufficient QA/QC information to assess precision.

Conclusion: Data are equivocal.

Total Suspended Solids (ATG 8): RMDL = 5 mg/L, 12 monitoring samples, IL, average = 0.48RMDL, maximum = 1.20RMDL.

Precision: 1 duplicate pair was reported with a difference of 0.2RMDL. The duplicate pair was below the RMDL.
Conclusion: Precision is acceptable.

Conclusion: Data are acceptable.

APPENDIX E

FOUND PARAMETER TABLES

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Table E1
Found Parameters for Albright and Wilson

ATG	PARAMETER	Written Assessment	CO 0100	IN 0400	ST 0200	ST 0300
4	Nitrate + Nitrite	No	X	X	X	X
	Total Kjeldahl Nitrogen	No			X	X
5	DOC	No	X	X	X	X
	TOC	Yes			X	X
6	Total phosphorus	Yes	X		X	X
7	Conductivity, average	No	X		---	---
	Specific conductance	No			X	X
8	Total suspended solids	Yes	X	X	X	X
9	Aluminum	No	X	X	X	X
	Boron	No			X	
	Chromium	No			X	
	Copper	Yes			X	
	Strontium	No	X	X	X	X
	Vanadium	No			X	
	Zinc	No	X	X	X	X
11	Chromium (hexavalent)	No			X	X
12	Mercury	Yes	X	X	X	X
14	Phenolics (4AAP)	No	X			
16	Chloroform	No	X	X	---	---
	Dibromochloromethane	No	X	X	---	---
25	Oil and grease	No	X	X	X	X
11	Chloride	No	X	X	---	---
13	Sulphate	No	X	X	---	---

NOTE: "X" = found parameter for the control point
"---" = parameter not monitored for the control point

SAMPLING POINTS
CO 0100 - Final Discharge to the River
IN 0400 - Intake Water to Site
ST 0200 - Storm Culvert
ST 0300 - Sidall Street

Table E2
Found Parameters for Allied Chemical

ATG	PARAMETER	Written Assessment	PR 0100	PR 0300	PR 0600	IN 0800	ST 0200	ST 0500
1	COD	No		X	X	---	---	---
4	Ammonia plus Ammonium	Yes					X	---
	Nitrate + Nitrite	No	X		X	X	X	---
	Total Kjeldahl Nitrogen	No	X	X			X	---
5	DOC	Yes	X	X		X	X	X
	TOC	No	X	X			X	X
6	Total phosphorus	Yes		X			X	X
7	Specific conductance	No	X	X	X		X	X
8	Total suspended solids	No	X	X		X	X	X
9	Aluminum	Yes	X	X	X	X	X	X
	Boron	No	X	X	X	X	X	X
	Cadmium	Yes	X	X	X			X
	Chromium	Yes	X		X			X
	Copper	Yes	X	X				X
	Molybdenum	No		X				X
	Nickel	Yes		X				
	Strontium	Yes	X	X	X	X	X	X
	Zinc	Yes	X	X	X	X	X	X
10	Antimony	No	X	X	X	---	---	X
	Arsenic	No	X	X	X	---	---	X
12	Mercury	No	X	X		X	X	---
14	Phenolics (4AAP)	Yes	X		X		---	---
15	Sulphide	No				---	X	
16	1,1,2,2-Tetrachloroethane	No	X		X	---	---	---
	1,1,2-Trichloroethane	No	X		X	---	---	---
	1,1-Dichloroethane	No	X		X	---	---	---
	1,1-Dichloroethylene	No	X		X	---	---	---
	1,2-Dichlorobenzene	No	X		X	---	---	---
	1,2-Dichloroethane	No	X		X	---	---	---
	1,2-Dichloropropane	No	X		X	---	---	---
	1,3-Dichlorobenzene	No	X		X	---	---	---
	1,4-Dichlorobenzene	No	X		X	---	---	---
	Bromoform	No	X		X	---	---	---
	Bromomethane	No	X		X	---	---	---
	Carbon tetrachloride	Yes	X		X	---	---	---
	Chlorobenzene	No	X		X	---	---	---
	Chloroform	Yes	X	X	X	---	---	---

Table E2 (cont'd)
Found Parameters for Allied Chemical

ATG	PARAMETER	Written Assessment	PR 0100	PR 0300	PR 0600	IN 0800	ST 0200	ST 0500
16	Chloromethane	No	X		X	---	---	---
	Cis-1,3-Dichloropropylene	No	X		X	---	---	---
	Dibromochloromethane	No	X		X	---	---	---
	Ethylene dibromide	No	X		X	---	---	---
	Methylene chloride	Yes	X	X	X		---	---
	Tetrachloroethylene	No	X		X	---	---	---
	Trans-1,2-Dichloroethylene	No	X		X	---	---	---
	Trans-1,3-Dichloropropylene	No	X		X	---	---	---
	Trichloroethylene	No	X		X	---	---	---
	Trichlorofluoromethane	No	X		X	---	---	---
	Vinyl chloride	No	X		X	---	---	---
17	Benzene	No	X		X	---	---	---
	Styrene	No	X	X	X	---	---	---
	Toluene	Yes	X		X	---	---	---
	m-Xylene and p-Xylene	No	X		X	---	---	---
	o-Xylene	No	X		X	---	---	---
18	Acrolein	No	X		X	---	---	---
	Acrylonitrile	No	X		X	---	---	---
19	Bis(2-ethylhexyl) phthalate	Yes	X	X	X	---	---	---
23	1,2,3,4-Tetrachlorobenzene	No	X		X	---	---	---
	1,2,3,5-Tetrachlorobenzene	Yes	X		X	---	---	---
	1,2,3-Trichlorobenzene	No	X		X	---	---	---
	1,2,4,5-Tetrachlorobenzene	Yes	X		X	---	---	---
	1,2,4-Trichlorobenzene	No	X		X	---	---	---
	2,4,5-Trichlorotoluene	No	X		X	---	---	---
	Hexachlorobenzene	No	X		X	---	---	---
	Hexachlorobutadiene	No	X		X	---	---	---
	Hexachlorocyclopentadiene	Yes	X		X	---	---	---
	Hexachloroethane	Yes	X		X	---	---	---
	Octachlorostyrene	Yes	X		X	---	---	---
	Pentachlorobenzene	No	X		X	---	---	---

Table E2 (cont'd)
Found Parameters for Allied Chemical

ATG	PARAMETER	Written Assessment	PR 0100	PR 0300	PR 0600	IN 0800	ST 0200	ST 0500
24	Total T4CDD	No		X		---	---	---
	Total H7CDD	Yes	X			---	---	---
	Total H7CDF	No	X			---	---	---
	Total O8CDD	No	X		X	---	---	---
	Total O8CDF	Yes	X			---	---	---
25	Oil and grease	Yes	X	X	X	X	X	X
I1	Chloride	No	X	X	X	X	X	X
I3	Sulphate	No	X	X	X	---	X	---

NOTE: "X" = found parameter for the control point
"---" = parameter not monitored for the control point

SAMPLING POINTS
PR 0100 - Genetron
PR 0300 - HF Bleed
PR 0600 - HCl
IN 0800 - Intake Water to Site
ST 0200 - Mailloux Quarry
ST 0500 - East Road Drain

Table E3
Found Parameters for Cabot Canada

ATG	PARAMETER	Written Assessment	CO 0100
1	COD	No	X
2	Cyanide Total	Yes	X
4	Nitrate + Nitrite	No	X
	Total Kjeldahl Nitrogen	Yes	X
5	DOC	No	X
7	Specific conductance	No	X
8	Total suspended solids	Yes	X
9	Aluminum	No	X
	Copper	Yes	X
	Strontium	No	X
	Zinc	Yes	X
15	Sulphide	No	X
25	Oil and grease	Yes	X
I1	Chloride	Yes	X
I3	Sulphate	No	X

NOTE: "X" = found parameter for the control point

SAMPLING POINTS
CO 0100 - Filter Bed
IN 0400 - Intake Water to Site (no data)

Table E4
Found Parameters for Columbian Chemicals

ATG	PARAMETER	Written Assessment	ST 0100	ST 0200
4	Ammonia plus Ammonium	No	X	X
	Nitrate + Nitrite	No	X	X
	Total Kjeldahl Nitrogen	No	X	X
5	DOC	No	X	X
	TOC	No	X	X
6	Total phosphorus	No	X	X
7	Specific conductance	No	X	X
8	Total suspended solids	No	X	X
9	Aluminum	No	X	X
	Boron	No	X	X
	Copper	No	X	X
	Strontium	No	X	X
	Zinc	No	X	X
14	Phenolics (4AAP)	No	X	X
15	Sulphide	No	X	X
25	Oil and grease	No	X	X
11	Chloride	No	X	X
13	Sulphate	No	X	X

NOTE: "X" = found parameter for the control point

SAMPLING POINTS
ST 0100 - West Outfall
ST 0200 - East Outfall
IN 0400 - Intake Water to Site (no data)

Table E5
Found Parameters for Cyanamid Canada (Niagara)

ATG	PARAMETER	Written Assessment	CO 0100	CO 0200	CO 0500	CO 0600	IN 0400
1	COD	No					X
2	Cyanide Total	No	X	X	X	X	
4	Ammonia plus Ammonium	No	X		X	X	
	Nitrate + Nitrite	No	X	X	X	X	X
	Total Kjeldahl Nitrogen	Yes	X	X	X	X	X
5	DOC	Yes	X	X	X	X	X
	TOC	No				X	
8	Total suspended solids	Yes	X	X	X	X	X
9	Aluminum	Yes	X	X	X	X	X
	Strontium	No	X	X	X	X	X
	Zinc	No	X	X		X	X
14	Phenolics (4AAP)	No			X	X	
15	Sulphide	No		X			
25	Oil and grease	No	X	X		X	X
I1	Chloride	No		X			X
I3	Sulphate	No		X			X

NOTE: "X" = found parameter for the control point

SAMPLING POINTS
CO 0100 - Whitty Creek
CO 0200 - Hydro Canal
CO 0500 - Cooling Pond
CO 0600 - South Fork
IN 0400 - Intake Water to Site

Table E6
Found Parameters for Cyanamid Canada (Welland)

ATG	PARAMETER	Written Assessment	CO 0200	CO 0400	OT 1300	IN 1500	ST 0500	ST 0600	ST 0700	ST 0800	ST 0900	ST 1000	ST 1100	ST 1200
1	COD	No	X	X	---		---	---	---	---	---	---	---	---
2	Cyanide Total	Yes	X	X	---		X			X	X	X	X	X
4	Ammonia plus Ammonium	No	X	X	---		X	X	X	X	X	X	X	X
	Nitrate + Nitrite	Yes	X	X	---	X	X	X	X	X	X	X	X	X
	Total Kjeldahl Nitrogen	Yes	X	X	---	X	X	X	X	X	X	X	X	X
5	DOC	Yes	X	X	X	X	X	X	X	X	X	X	X	X
	TOC	No	X	X	---		X	X	X	X	X	X	X	X
6	Total phosphorus	Yes	X	X	X	X	X	X	X	X	X	X	X	X
7	Conductivity, average	No	X	---	---	---	---	---	---	---	---	---	---	---
	Specific conductance	No	X	X			X	X	X	X	X	X	X	X
8	Total suspended solids	Yes	X	X	X	X	X	X	X	X	X	X	X	X
9	Aluminum	Yes	X	X	---	X	X	X	X	X	X	X	X	X
	Boron	No			---		X			X	X		X	
	Copper	Yes			---		X	X	X	X	X	X	X	X
	Lead	No			---			X	X	X	X		X	
	Molybdenum	No			---			X	X	X	X	X	X	
	Nickel	No			---					X	X			
	Strontium	No	X	X	---	X	X	X	X	X	X	X	X	X
	Zinc	Yes	X	X	---		X	X	X	X	X	X	X	X
10	Antimony	No	X	X	---									
	Arsenic	No		X	---					X				
	Selenium	Yes			---		X							
12	Mercury	Yes			---					X				X
14	Phenolics (4AAP)	No	X	X	---		X	X	X	X	X		X	X
15	Sulphide	No		X	---		---	---	---	---	---	---	---	---

Table E6 (cont'd)
Found Parameters for Cyanamid Canada (Welland)

ATG	PARAMETER	Written Assessment	CO 0200	CO 0400	OT 1300	IN 1500	ST 0500	ST 0600	ST 0700	ST 0800	ST 0900	ST 1000	ST 1100	ST 1200
17	Toluene	Yes		X	---		---	---	---	---	---	---	---	---
25	Oil and grease	No	X	X		X	X	X	X	X	X	X	X	X
27	PCBT	Yes			---			X	X					
I1	Chloride	No	X	X	---	X	---	---	---	---	---	---	---	---
I3	Sulphate	No	X	X	---	X	---	---	---	---	---	---	---	---

NOTE: "X" = found parameter for the control point
"---" = parameter not monitored for the control point

SAMPLING POINTS
CO 0200 - Millers Creek
CO 0400 - Sludge Road #11
OT 1300 - DICY Cooling Water
IN 1500 - Intake Water to Site
ST 0500 - River Pumphouse Runoff
ST 0600 - 1st Avenue (surface)
ST 0700 - 1st Avenue (in-ground)
ST 0800 - 3rd Avenue
ST 0900 - 4th Avenue
ST 1000 - 5th Avenue (west)
ST 1100 - 5th Avenue (east)
ST 1200 - Lab. Sewer

Table E7
Found Parameters for ETI

ATG	PARAMETER	Written Assessment	OT 0100	ST 0300	ST 0400	ST 0500
4	Ammonia plus Ammonium	Yes	X	X	X	X
	Nitrate + Nitrite	Yes	X	X	X	X
	Total Kjeldahl Nitrogen	No	X	X	X	X
5	DOC	No	X	X	X	X
	TOC	No	X	X		X
6	Total phosphorus	No	X			
8	Total suspended solids	No	X	X	X	
9	Aluminum	No	X	X	X	---
	Strontium	No	X	X	X	---
	Zinc	Yes	X	X		---
25	Oil and grease	Yes	X	X	X	X

NOTE: "X" = found parameter for the control point
"---" = parameter not monitored for the control point

SAMPLING POINTS
OT 0100 - Discharge at Weir
IN 0700 - Intake
ST 0300 - West storm
ST 0400 - Cooks Creek
ST 0500 - Beaver Pond

Table E8
Found Parameters for Exolon-ESK

ATG	PARAMETER	Written Assessment	CO 0100
5	DOC	Yes	X
	TOC	No	X
6	Total phosphorus	No	X
8	Total suspended solids	Yes	X
9	Aluminum	Yes	X
	Copper	Yes	X
	Strontium	Yes	X
15	Sulphide	Yes	X
I1	Chloride	No	X
I3	Sulphate	No	X

NOTE: "X" = found parameter for the control point

SAMPLING POINTS
CO 0100 - Beaver Dam Road
IN 0300 - Intake Water to Site (no data)

Table E9
Found Parameters for General Chemical

ATG	PARAMETER	Written Assessment	CO 0100	CO 0200	IN 0600
1	COD	No	X	X	X
2	Cyanide Total	No	X	X	
4	Ammonia plus Ammonium	Yes	X	X	
	Nitrate + Nitrite	No	X	X	X
	Total Kjeldahl Nitrogen	Yes	X	X	X
5	DOC	No	X	X	X
	TOC	No	X		
6	Total phosphorus	Yes	X	X	
7	Specific conductance	No	X	X	
8	Total suspended solids	Yes	X	X	X
9	Aluminum	Yes	X	X	X
	Beryllium	No			
	Boron	No	X		
	Cadmium	No	X		
	Chromium	No			
	Cobalt	No	X		
	Copper	No		X	
	Lead	No	X		
	Molybdenum	No	X		
	Nickel	No	X		
	Strontium	No	X	X	X
	Thallium	No	X		
	Vanadium	No			
	Zinc	No	X		X
10	Antimony	No		---	
	Arsenic	Yes	X	---	
	Selenium	No		---	
12	Mercury	No	X	X	
14	Phenolics (4AAP)	Yes	X	X	
15	Sulphide	No	X	X	
16	1,1,2,2-Tetrachloroethane	Yes	X		
	1,1,2-Trichloroethane	Yes	X		
	1,1-Dichloroethane	No	X		
	1,2-Dichloroethane	No	X		
	1,2-Dichloropropane	No	X		
	Bromoform	Yes	X		
	Bromomethane	Yes	X		

Table E9 (cont'd)
Found Parameters for General Chemical

ATG	PARAMETER	Written Assessment	CO 0100	CO 0200	IN 0600
16	Chlorobenzene	No	X		
	Chloroform	No	X		
	Chloromethane	Yes	X		
	Cis-1,3-Dichloropropylene	No	X		
	Dibromochloromethane	No	X		
	Ethylene dibromide	No	X		
	Methylene chloride	Yes	X		
	Tetrachloroethylene	No	X		
	Trans-1,3-Dichloropropylene	No	X		
	Trichlorofluoromethane	Yes	X		
	Vinyl chloride	No	X		
17	Benzene	No	X		
	Styrene	No	X		
	Toluene	No	X		
	o-Xylene	No	X		
18	Acrolein	No	X		
	Acrylonitrile	No	X		
24	Total T4CDF	No		X	
	Total P5CDF	No		X	
	Total O8CDD	No	X	X	X
25	Oil and grease	Yes	X	X	X
I1	Chloride	Yes	X	X	X
I3	Sulphate	Yes	X	X	X

NOTE: "X" = found parameter for the control point
"---" = parameter not monitored for the control point

SAMPLING POINTS
CO 0100 - North Drain
CO 0200 - Main Drain
CO 0400 - Soda Ash Basin
IN 0600 - Intake

Table E10
Found Parameters for ICI Canada (Cornwall)

ATG	PARAMETER	Written Assessment	PR 0400	CO 0300	IN 0200
1	COD	No	X	X	
2	Cyanide Total	No	X		---
4	Nitrate + Nitrite	No	X	X	X
	Total Kjeldahl Nitrogen	No	X	X	
5	DOC	Yes	X	X	X
	TOC	Yes	X	X	
6	Total phosphorus	Yes	X	X	
7	Specific conductance	No	X	X	
8	Total suspended solids	Yes	X	X	
	Volatile suspended solids	No	X	X	---
9	Aluminum	Yes	X	X	X
	Beryllium	Yes	X		X
	Boron	Yes	X	X	---
	Cadmium	Yes		X	X
	Chromium	Yes	X	X	
	Cobalt	Yes	X		
	Copper	Yes	X	X	X
	Lead	Yes	X		
	Molybdenum	Yes	X		X
	Nickel	Yes	X		
	Strontium	Yes	X	X	---
	Thallium	Yes	X		X
	Vanadium	Yes	X		X
	Zinc	Yes	X	X	X
10	Arsenic	No	X		
12	Mercury	Yes	X	X	
14	Phenolics (4AAP)	No	X	X	X
15	Sulphide	Yes		X	
16	1,2-Dichloroethane	Yes	X		
	Chloroform	Yes	X	X	X
	Dibromochloromethane	Yes	X	X	X
	Methylene chloride	Yes	X		
23	1,2,3,4-Tetrachlorobenzene	No	X		
	1,2,3,5-Tetrachlorobenzene	No	X		
	1,2,3-Trichlorobenzene	Yes	X	X	X
	1,2,4,5-Tetrachlorobenzene	No	X		

Table E10 (cont'd)
Found Parameters for ICI Canada (Cornwall)

ATG	PARAMETER	Written Assessment	PR 0400	CO 0300	IN 0200
23	1,2,4-Trichlorobenzene	No	X	X	
	2,4,5-Trichorotoluene	No	X		
	Hexachlorobenzene	Yes	X	X	
	Hexachlorobutadiene	Yes	X	X	
	Hexachlorocyclopentadiene	Yes	X	X	X
	Hexachloroethane	Yes	X	X	
	Octachlorostyrene	Yes	X		
	Pentachlorobenzene	Yes	X	X	
24	Total T4CDD	Yes	X		---
	Total T4CDF	No	X	X	---
	Total P5CDD	No	X		---
	Total P5CDF	No	X		---
	Total H6CDD	No	X		---
	Total H6CDF	No	X		---
	Total H7CDF	No	X		---
	Total O8CDF	Yes	X	X	---
25	Oil and grease	No	X	X	
27	PCBT	No	X		---
I1	Chloride	Yes	X	X	X
I3	Sulphate	Yes	X	X	X

NOTE: "X" = found parameter for the control point
"---" = parameter not monitored for the control point

SAMPLING POINTS
PR 0400 - Manhole 15
CO 0300 - LEL-2
IN 0200 - Intake Water to Site

Table E11
Found Parameters for ICI Canada (Courtright)

ATG	PARAMETER	Written Assessment	PR 0300	CO 0200	CO 0500	CO 0700	CO 0800	CO 1000	OT 0600	OT 1100	OT 1200	IN 1400	BA 0900
1	COD	No		X			X	X	---	---	---		---
2	Cyanide Total	No	X		X				---	---	---		---
4	Ammonia plus Ammonium	Yes	X	X	X	X	X						---
	Nitrate + Nitrite	Yes	X	X	X	X	X	X	X	---	---	X	---
	Total Kjeldahl Nitrogen	Yes	X	X	X	X	X	X		---	---		---
5	DOC	Yes	X	X	X	X	X	X	X	X	X	X	---
	TOC	Yes	X				X	X					---
6	Total phosphorus	No	X		X			X					---
7	Conductivity, average	No	X	---	---	---	---	---	---	---	---	---	---
	Specific conductance	No	X					X					
8	Total suspended solids	Yes	X	X	X	X	X	X	X	X	X	X	
9	Aluminum	Yes	X	X	X	X	X	X	X	---	---	X	---
	Boron	No						X		---	---		---
	Copper	Yes	X					X		---	---	X	---
	Strontium	Yes	X	X	X	X	X	X	X	---	---	X	---
	Zinc	Yes	X		X	X	X		X	---	---	X	---
14	Phenolics (4AAP)	Yes	X		X	X	X			---	---	X	---
16	Chloroform	No			X				---	---	---		---
	Chloromethane	Yes			X				---	---		X	

Table E11 (cont'd)
Found Parameters for ICI Canada (Courtright)

ATG	PARAMETER	Written Assessment	PR 0300	CO 0200	CO 0500	CO 0700	CO 0800	CO 1000	OT 0600	OT 1100	OT 1200	IN 1400	BA 0900
20	Phenol	No				X			---	---	---		---
I1	Chloride	Yes	X	X	X	X	X	X	---	---	---	X	---
I3	Sulphate	Yes	X	X	X	X	X	X	X	---	---	X	---

NOTE: "X" = found parameter for the control point
"---" = parameter not monitored for the control point

SAMPLING POINTS
PR 0300 - Ditch after Emergency
CO 0200 - Final Discharge
CO 0400 - Gypsum Pond
CO 0500 - 30" Concrete
CO 0700 - Manhole #5
CO 0800 - 42" from A2
CO 1000 - A2 Neutralizer Overflow
OT 0600 - 18" Black Polyethylene
OT 1100 - 72" from A1
OT 1200 - from Ammonia Storage
IN 1400 - Intake
BA 0900 - A1 regenerator

Table E12
Found Parameters for IMC

ATG	PARAMETER	Written Assessment	CO 0300
1	COD	No	X
4	Ammonia plus Ammonium	No	X
	Nitrate + Nitrite	No	X
	Total Kjeldahl Nitrogen	Yes	X
5	DOC	Yes	X
	TOC	No	X
6	Total phosphorus	No	X
7	Specific conductance	No	X
8	Total suspended solids	No	X
9	Aluminum	Yes	X
	Boron	No	X
	Strontium	Yes	X
	Zinc	Yes	X
14	Phenolics (4AAP)	No	X
15	Sulphide	No	X
25	Oil and grease	No	X
I1	Chloride	No	X
I3	Sulphate	Yes	X

NOTE: "X" = found parameter for the control point
"---" = parameter not monitored for the control point

SAMPLING POINTS
CO 0300 - Final Effluent
IN 0200 - Intake Water to Site (no data)

Table E13
Found Parameters for Linde (Moore)

ATG	PARAMETER	Written Assessment	CO 0100
1	COD	No	X
4	Nitrate + Nitrite	No	X
	Total Kjeldahl Nitrogen	No	X
5	DOC	Yes	X
	TOC	No	X
6	Total phosphorus	No	X
7	Specific conductance	No	X
8	Total suspended solids	Yes	X
9	Aluminum	Yes	X
	Boron	Yes	X
	Chromium	No	X
	Copper	Yes	X
	Strontium	Yes	X
	Zinc	Yes	X
10	Arsenic	No	X
16	Bromoform	No	X
	Methylene chloride	Yes	X
25	Oil and grease	Yes	X
11	Chloride	No	X
13	Sulphate	No	X

NOTE: "X" = found parameter for the control point

SAMPLING POINTS
CO 0100 - Final
IN 0300 - Intake Water to Site (no data)

Table E14
Found Parameters for Linde (Sarnia)

ATG	PARAMETER	Written Assessment	CO 0100
1	COD	No	X
4	Ammonia plus Ammonium	No	X
	Nitrate + Nitrite	No	X
	Total Kjeldahl Nitrogen	No	X
5	DOC	Yes	X
	TOC	Yes	X
6	Total phosphorus	Yes	X
7	Specific conductance	No	X
8	Total suspended solids	Yes	X
9	Aluminum	Yes	X
	Boron	Yes	X
	Copper	Yes	X
	Strontium	Yes	X
	Zinc	Yes	X
10	Arsenic	No	X
24	Total H7CDD	No	X
	Total O8CDD	No	X
25	Oil and grease	No	X
I1	Chloride	No	X
I3	Sulphate	No	X

NOTE: "X" = found parameter for the control point

SAMPLING POINTS
CO 0100 - To Cole Drain
IN 0400 - Intake

Table E15
Found Parameters for Linde
(Sault Ste. Marie)

ATG	PARAMETER	Written Assessment	CO 0100
1	COD	No	X
4	Nitrate + Nitrite	No	X
5	DOC	Yes	X
	TOC	No	X
6	Total phosphorus	No	X
7	Specific conductance	No	X
8	Total suspended solids	Yes	X
	Volatile suspended solids	No	X
9	Aluminum	Yes	X
	Boron	Yes	X
	Copper	Yes	X
	Strontium	Yes	X
	Zinc	Yes	X
16	Chloroform	No	X
	Methylene chloride	Yes	X
24	Total H7CDD	No	X
	Total O8CDD	No	X
25	Oil and grease	No	X
I1	Chloride	No	X
I3	Sulphate	No	X

NOTE: "X" = found parameter for the control point

SAMPLING POINTS
CO 0100 - Outfall at Safety Drive
IN 0300 - Intake Water to Site

Table E16
Found Parameters for Liquid Carbonic (Courtright)

ATG	PARAMETER	Written Assessment	CO 0100	IN 0300
5	DOC	Yes	X	X
	TOC	No	X	
9	Aluminum	Yes	X	X
	Boron	Yes	X	
	Strontium	Yes	X	X
	Zinc	Yes	X	
25	Oil and grease	Yes	X	X

NOTE: "X" = found parameter for the control point

SAMPLING POINTS
CO 0100 - South Ditch
IN 0300 - Intake Water to Site

Table E17
Found Parameters for Liquid Carbonic (Maitland)

ATG	PARAMETER	Written Assessment	CO 0100	IN 0300
5	DOC	Yes	X	
	TOC	Yes	X	X
7	Specific conductance	No	X	---
9	Aluminum	Yes	X	X
	Boron	No	X	X
	Strontium	Yes	X	X
	Zinc	Yes	X	X
25	Oil and grease	Yes	X	X

NOTE: "X" = found parameter for the control point
"---" = parameter not monitored for the control point

SAMPLING POINTS
CO 0100 - Main
IN 0300 - Intake Water to Site

Table E18
Found Parameters for Nitrochem

ATG	PARAMETER	Written Assessment	CO 0400	IN 0800	ST 0500
1	COD	No	X		---
2	Cyanide Total	No	X		---
4	Ammonia plus Ammonium	Yes	X	X	X
	Nitrate + Nitrite	Yes	X	---	X
	Total Kjeldahl Nitrogen	Yes	X		X
5	DOC	Yes	X	X	X
	TOC	No	X		X
6	Total phosphorus	Yes	X		X
7	Specific conductance	No	X		X
8	Total suspended solids	Yes	X		X
	Volatile suspended solids	No	X		---
9	Aluminum	No	X		X
	Boron	No	X		X
	Copper	No	X		X
	Strontium	Yes	X	X	X
	Vanadium	No	X	---	
	Zinc	Yes	X		X
12	Mercury	No	X		---
14	Phenolics (4AAP)	Yes	X		---
15	Sulphide	No	X	X	---
16	1,1-Dichloroethane	No	X		---
	1,1-Dichloroethylene	Yes	X		---
	Bromoform	No	X		---
	Chloroform	Yes	X		---
	Tetrachloroethylene	Yes	X		---
	Trans-1,2-Dichloroethylene	Yes	X		---
	Trichloroethylene	Yes	X		---
20	Phenol	Yes	X		---
24	Total H6CDF	No	X		---
	Total H7CDD	Yes	X		---
	Total H7CDF	Yes	X		---
	Total O8CDD	Yes	X		---
	Total O8CDF	No	X		---

Table E18 (cont'd)
Found Parameters for Nitrochem

ATG	PARAMETER	Written Assessment	CO 0400	IN 0800	ST 0500
25	Oil and grease	Yes	X		X
27	PCBT	No	X		---
I1	Chloride	No	X	X	---
I3	Sulphate	No	X	X	---

NOTE: "X" = found parameter for the control point
"---" = parameter not monitored for the control point

SAMPLING POINTS
CO 0400 - Final
IN 0800 - Intake Water to Site
ST 0500 - Storm at Brockchem Road

Table E19
Found Parameters for Norton

ATG	PARAMETER	Written Assessment	CO 0200	CO 0300	CO 0400	IN 0800	ST 0600
1	COD	No	X		X		---
4	Ammonia plus Ammonium	Yes		X			X
	Nitrate + Nitrite	No	X	X		X	X
	Total Kjeldahl Nitrogen	No		X		X	X
5	DOC	No	X	X	X	X	X
6	Total phosphorus	No	X			X	X
7	Conductivity, average	No		X		---	---
	Specific conductance	No		X			X
8	Total suspended solids	Yes	X	X	X	X	X
9	Aluminum	Yes	X	X	X	X	X
	Boron	Yes	X	X			X
	Cadmium	No					X
	Chromium	Yes		X			X
	Copper	No		X	X		X
	Lead	No					X
	Molybdenum	No					X
	Strontium	Yes	X	X	X	X	X
	Vanadium	No					X
	Zinc	No	X	X	X	X	X
12	Mercury	No	X				X
16	Chloroform	No	X				---
	Methylene chloride	No	X				---
25	Oil and grease	Yes	X	X	X	X	X
11	Chloride	No	X	X	X	X	---
13	Sulphate	Yes	X	X	X	X	X

NOTE: "X" = found parameter for the control point
"---" = parameter not monitored for the control point

SAMPLING POINTS
CO 0200 - Sewer B
CO 0300 - Sewer C
CO 0400 - Sewer D
IN 0800 - Intake Water to Site
ST 0600 - Storm Sewer

Table E20
Found Parameters for Partek

ATG	PARAMETER	Written Assessment	OT 0300	ST 0100	ST 0200	ST 0400
4	Ammonia plus Ammonium	No	---	X	X	X
	Nitrate + Nitrite	No	---	X	X	X
	Total Kjeldahl Nitrogen	No	---	X	X	X
5	DOC	No	X	X	X	X
	TOC	No		X	X	X
6	Total phosphorus	Yes		X		X
7	Specific conductance	No				X
8	Total suspended solids	No		X	X	X
9	Aluminum	No	---	X	X	---
	Boron	No	---	X		---
	Copper	No	---	X		---
	Strontium	No	---	X	X	---
	Zinc	No	---	X	X	X
10	Arsenic	No	---			X
14	Phenolics (4AAP)	No	---	X	X	X
25	Oil and grease	Yes	X	X	X	X
13	Sulphate	No	X	X	X	X

NOTE: "X" = found parameter for the control point
"---" = parameter not monitored for the control point

SAMPLING POINTS
OT 0300 - Cooling Water
IN 0600 - Intake Water to Site
ST 0100 - East Storm
ST 0200 - West Drain
ST 0400 - Raw Material Run-off

Table E21
Found Parameters for Puritan-Bennett

ATG	PARAMETER	Written Assessment	OT 0100	IN 0300
4	Ammonia plus Ammonium	No	X	X
	Nitrate + Nitrite	Yes	X	X
	Total Kjeldahl Nitrogen	No	X	X
5	DOC	Yes	X	X
7	Specific conductance	No	X	X

NOTE: "X" = found parameter for the control point

SAMPLING POINTS
OT 0100 - To Creek
IN 0300 - Intake Water to Site

Table E22
Found Parameters for Stanchem

ATG	PARAMETER	Written Assessment	IN 0300	BA 0100
1	COD	No		X
4	Ammonia plus Ammonium	Yes		X
	Nitrate + Nitrite	Yes	X	X
	Total Kjeldahl Nitrogen	Yes		X
5	DOC	Yes	X	X
	TOC	No	---	X
6	Total phosphorus	No		X
7	Specific conductance	No		X
8	Total suspended solids	Yes		X
9	Aluminum	Yes	X	X
	Beryllium	Yes	X	
	Boron	Yes	---	X
	Cadmium	Yes	X	X
	Chromium	No		X
	Copper	Yes	X	X
	Lead	Yes		X
	Molybdenum	Yes	X	
	Nickel	Yes		X
	Strontium	Yes	---	X
	Thallium	Yes	X	X
	Vanadium	No	X	
	Zinc	Yes	X	X
10	Antimony	No		X
	Arsenic	No		X
	Selenium	No		X
12	Mercury	No		X
14	Phenolics (4AAP)	No	X	X
16	Carbon tetrachloride	Yes		X
	Chloroform	Yes	X	X
	Dibromochloromethane	Yes	X	X
	Tetrachloroethylene	Yes		X
17	Benzene	Yes		X

Table E22 (cont'd)
Found Parameters for Stanchem

ATG	PARAMETER	Written Assessment	IN 0300	BA 0100
23	1,2,3,4-Tetrachlorobenzene	Yes		X
	1,2,3,5-Tetrachlorobenzene	Yes		X
	1,2,3-Trichlorobenzene	Yes	X	X
	1,2,4,5-Tetrachlorobenzene	Yes		X
	1,2,4-Trichlorobenzene	Yes		X
	2,4,5-Trichlorotoluene	Yes		X
	Hexachlorobenzene	Yes		X
	Hexachlorobutadiene	Yes		X
	Hexachlorocyclopentadiene	Yes	X	X
	Hexachloroethane	Yes		X
	Octachlorostyrene	Yes		X
	Pentachlorobenzene	Yes		X
24	Total O8CDD	No	---	X
	Total O8CDF	No	---	X
25	Oil and grease	No		X
I1	Chloride	Yes	X	X
I3	Sulphate	Yes	X	X

NOTE: "X" = found parameter for the control point
"---" = parameter not monitored for the control point

SAMPLING POINTS
IN 0300 - Intake Water to Site
BA 0100 - Conpac Effluent

Table E23
Found Parameters for Sulco

ATG	PARAMETER	Written Assessment	CO 0100	IN 0400	IN 0500	ST 0200
1	COD	No	X	---	---	---
2	Cyanide Total	No	X	---	---	
4	Ammonia plus Ammonium	No	X	---	---	X
	Nitrate + Nitrite	Yes	X	---	---	X
	Total Kjeldahl Nitrogen	No	X	---	---	X
5	DOC	No	X	---	---	X
	TOC	No	X	---	---	X
6	Total phosphorus	Yes	X	---	---	X
7	Specific conductance	No	X	---	---	
8	Total suspended solids	No	X	---	---	X
9	Aluminum	Yes	X			X
	Boron	No	X			
	Cadmium	No	X			
	Chromium	No				X
	Cobalt	No	X			
	Copper	No	X			X
	Lead	No	X			X
	Nickel	No	X			X
	Strontium	Yes	X			X
	Vanadium	No	X			X
	Zinc	Yes	X			X
10	Arsenic	No	X			X
14	Phenolics (4AAP)	No	X	---	---	X
15	Sulphide	No	X	---	---	X
25	Oil and grease	Yes	X	---	---	X
I1	Chloride	Yes	X	---	---	X
I3	Sulphate	Yes	X	---	---	X

NOTE: "X" = found parameter for the control point
"---" = parameter not monitored for the control point

SAMPLING POINTS
CO 0100 - Final Effluent
IN 0400 - Municipal Intake
IN 0500 - Canagagigue Creek Intake
ST 0200 - Storm

Table E24
Found Parameters for UCAR (Welland)

ATG	PARAMETER	Written Assessment	CO 0200	CO 0300	OT 0100	ST 0400	ST 0600	WA 0500
4	Nitrate + Nitrite	No	X	X	---	---	---	---
5	DOC	Yes	X	X	X	X	X	X
	TOC	Yes				X	X	X
6	Total phosphorus	No	X			X		X
7	Conductivity, average	No	X		---	---	---	---
	Specific conductance	No	X			X	X	X
8	Total suspended solids	Yes	X			X	X	X
9	Aluminum	Yes	X	X	X	X	X	X
	Boron	No	X				X	X
	Chromium	Yes				X	X	X
	Copper	No				X		X
	Strontium	Yes	X	X	X	X	X	X
	Zinc	Yes	X	X	X	X	X	X
14	Phenolics (4AAP)	No	X	X	X	X	X	X
25	Oil and grease	No	X	X	X	X	X	X
11	Chloride	Yes	X	X	---	---	---	---
13	Sulphate	Yes	X	X	---	---	---	---

NOTE: "X" = found parameter for the control point
"---" = parameter not monitored for the control point

SAMPLING POINTS
CO 0200 - Government Dock
CO 0300 - Pump House Return
OT 0100 - #2 Weir
IN 0800 - Intake Water to Site (no data)
ST 0400 - Union Street Effluent
ST 0600 - Townline Ditch
WA 0500 - Waste Disposal Area Effluent

Table E25
Found Parameters for Washington Mills

ATG	PARAMETER	Written Assessment	CO 0100	IN 0400	ST 0200
1	COD	No	X	---	---
4	Ammonia plus Ammonium	No	X	---	---
	Total Kjeldahl Nitrogen	No	X	---	---
5	DOC	No	X	---	X
	TOC	No		---	X
6	Total phosphorus	No		---	X
7	Specific conductance	No	X	X	X
8	Total suspended solids	No	X	X	X
9	Aluminum	Yes	X	---	X
	Boron	Yes	X	---	X
	Strontium	Yes	X	---	X
	Zinc	No		---	X
14	Phenolics (4AAP)	No	X	---	---
15	Sulphide	No	X	---	---
25	Oil and grease	Yes	X	---	X
11	Chloride	Yes	X	X	---
13	Sulphate	Yes	X	X	---

NOTE: "X" = found parameter for the control point
"---" = parameter not monitored for the control point

SAMPLING POINTS
CO 0100 - Final Effluent
IN 0400 - Intake Water to Site
ST 0200 - Storm

Table E26
Found Parameters for Washington Mills Electro Minerals

ATG	PARAMETER	Written Assessment	CO 0100	CO 0200	IN 1200	ST 0800	ST 0900
5	DOC	No	X	X	X	X	X
	TOC	No		X	---	X	X
6	Total phosphorus	No			---	X	X
7	Specific conductance	No				X	X
8	Total suspended solids	No	X	X	X	X	X
9	Aluminum	Yes	X	X	X	X	X
	Boron	No				X	X
	Chromium	No				X	X
	Copper	Yes				X	X
	Lead	No				X	X
	Strontium	No	X	X	X	X	X
	Zinc	No				X	X
14	Phenolics (4AAP)	Yes	X	X		---	---
25	Oil and grease	Yes	X	X		X	X
I1	Chloride	No	X	X	---	---	---
I3	Sulphate	No	X	X	---	---	---

NOTE: "X" = found parameter for the control point
"---" = parameter not monitored for the control point

SAMPLING POINTS
CO 0100 - Queen Lagoon
CO 0200 - Old Lagoon
IN 1200 - Intake Water to Site
ST 0800 - 21" to Pell Creek
ST 0900 - 18" to Stanley Ave. Sewer

Table E27
Found Parameters for Welland Chemicals

ATG	PARAMETER	Written Assessment	OT 0300	OT 0400	OT 0500	BA 0100	BA 0200
1	COD	No	---	---	---	X	X
4	Ammonia plus Ammonium	No				X	
	Nitrate + Nitrite	No				X	X
	Total Kjeldahl Nitrogen	No				X	X
5	DOC	No	X	X	X	X	X
	TOC	No					X
7	Specific conductance	No				X	X
8	Total suspended solids	Yes				X	X
	Volatile suspended solids	No				X	
9	Aluminum	No				X	X
	Boron	No				X	X
	Cadmium	No					X
	Strontium	No				X	X
	Zinc	No				X	X
14	Phenolics (4AAP)	No				X	X
15	Sulphide	No				X	X
16	Chloroform	No				X	X
	Dibromochloromethane	No					X
	Methylene chloride	Yes				X	
17	o-Xylene	Yes					X
23	Hexachlorobenzene	No				X	X
	Pentachlorobenzene	No					X
25	Oil and grease	Yes	X	X	X	X	X
I1	Chloride	No				X	X
I3	Sulphate	No					X

NOTE: "X" = found parameter for the control point
"---" = parameter not monitored for the control point

SAMPLING POINTS
OT 0300 - Chlorine Fill Unit
OT 0400 - Aluminum Chloride East
OT 0500 - Aluminum Chloride South
IN 0700 - Intake Water to Site (no data)
BA 0100 - South Lagoon
BA 0200 - #1 Lagoon